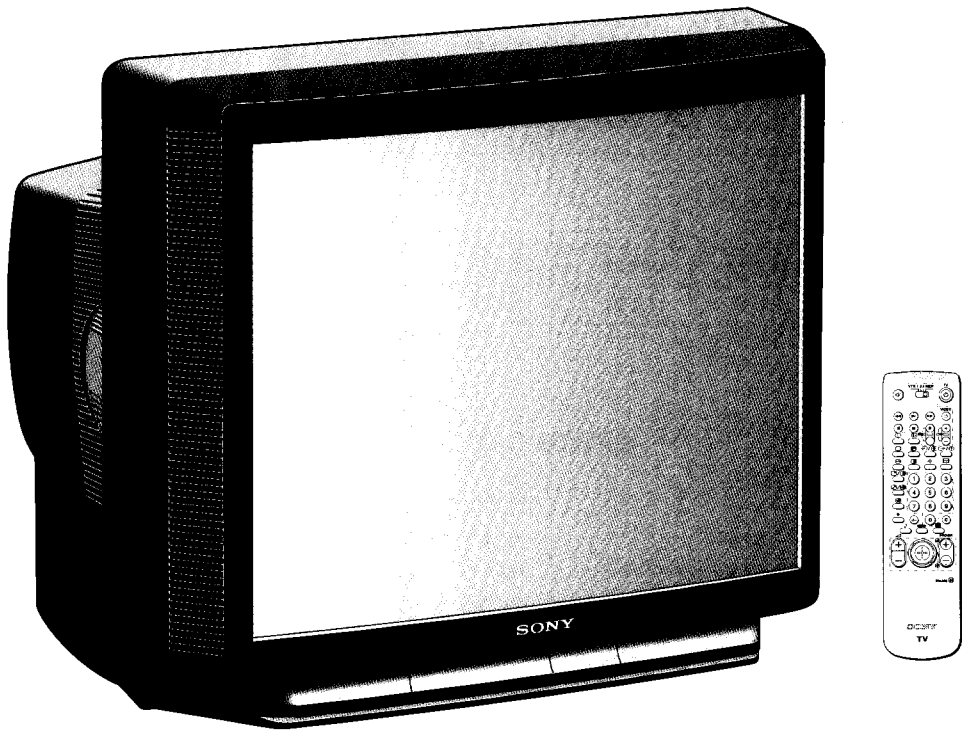


# SERVICE MANUAL

# AE-4 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-25X3A	RM-862	Italian	SCC-K43JA	KV-25X3D	RM-862	AEP	SCC-K41JA
KV-25X3B	RM-862	French	SCC-K45JA	KV-25X3E	RM-862	Spanish	SCC-K42JA



TRINITRON® COLOR TV  
**SONY®**

ITEM	MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20, A-H, H1, H2 UHF: E21-E69		PAL, SECAM NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05		PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05		PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05		PAL, SECAM NTSC3.58/4.43 (video input only)

MODEL	25X3A	25X3B	25X3D	25X3E
Power Consumption	110W	127W	127W	127W

## SPECIFICATIONS



Picture Tube Super Trinitron  
Approx. 63 cm (25inches)  
(Approx. 59 cm picture measured diagonally) 110° deflection

### Rear/Front Terminals

#### [REAR]





 21-pin Euro connector (CENELEC standard)

- Inputs for audio and video signals
- Inputs for RGB
- Outputs of TV video and audio signals

 2/-  2 21-pin Euro connector

- Inputs for audio and video signals
- Inputs for S video
- Outputs for audio and video signals (selectable)

#### [FRONT]

-  3 Video input - phono jack
-  3 Audio inputs - phono jacks
-  3 S video input - 4 pin DIN
-  Headphones jack: stereo minijack

Sound output 2x30W (music power), 2x15W (RMS)  
Dimensions 593x502x508 mm approx.  
Weight Approx. 33.1kg  
Supplied accessories Remote Commander RM-862 (1)  
Batteries R6 (2)  
Aerial cable (1)

#### Other features

FASTEXT, 100Hz Digital Plus, PIP,  
NICAM stereo (KV-25X3B/25X3E only)

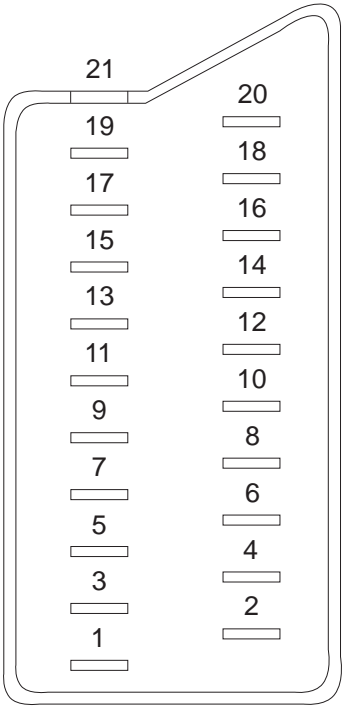
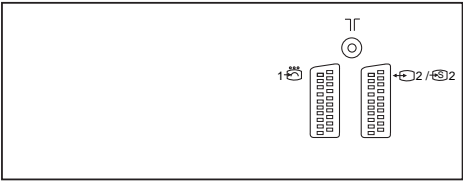
**[RM-862]**

Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x56x24 mm (w/h/d)
Weight	Approx. 110g (Not including battery)

**Design and specifications are subject to change without notice.**

Model name Item	KV-25X3A	KV-25X3B	KV-25X3D	KV-25X3E
PIP	ON	ON	ON	ON
MPIP	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON
VM Set (Velocity Modulation)	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON
TXT	ON	ON	ON	ON
FLOF	ON	ON	ON	ON
TOP	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON
Norm I	OFF	ON	OFF	OFF
Norm D/K	OFF	ON	ON	ON
Norm L	OFF	ON	OFF	OFF
Language Preset	Italian	French	German	Spanish

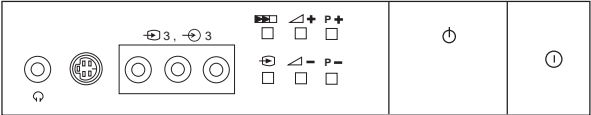
21 pin connector (G1, Y2/ j2)



Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) chroma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected ● Not Connected (Open) \* at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.





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**CAUTION**

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

**WARNING !!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.  
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.


**SAFETY-RELATED COMPONENT WARNING!!**  
COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**ATTENTION**

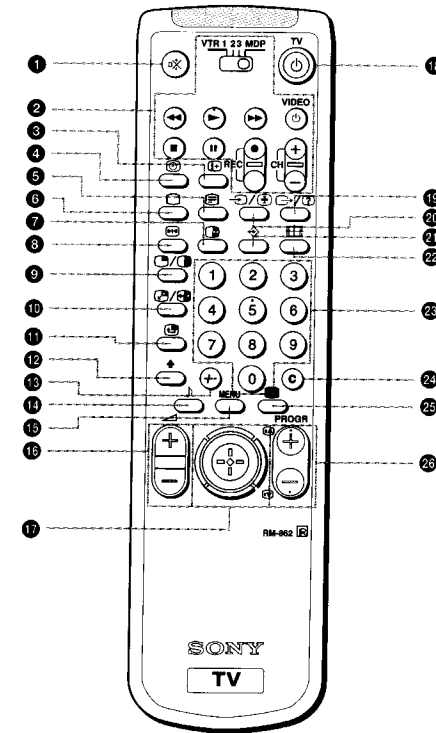
APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

**ATTENTION !!**

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.  
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

**ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!**  
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

The operating instructions mentioned here are partial abstracts from the Operating Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

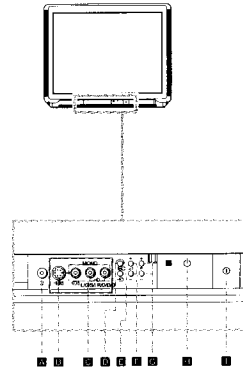


## Overview

This section briefly describes the buttons and controls on the TV set and on the Remote Commander. Please open the flaps at the front and at the back of the Instruction Manual for detailed illustrations of the Remote Commander and the TV set. Letters in boxes refer to the buttons and connectors on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the pages given next to each description.

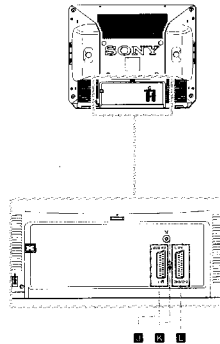
### TV set – front

Reference and Symbol	Name	Refer to page
<b>A</b>	Headphones jack	35
<b>B</b>	S video input jack	40
<b>C</b>	Input jacks (video, audio)	40
<b>D</b>	Reset button	28
<b>E</b>	Input mode button	28
<b>F</b>	Volume control	28
<b>G</b>	Programme buttons	28
<b>H</b>	Standby mode indicator	28
<b>I</b>	Main power switch	28



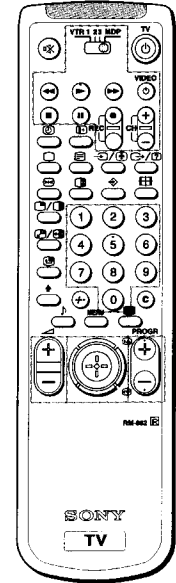
### TV set – rear

Reference and Symbol	Name	Refer to page
<b>J</b>	21-pin Euro connector	40
<b>K</b>	Aerial socket	26
<b>L</b>	21-pin Euro connector	40



## Remote Commander

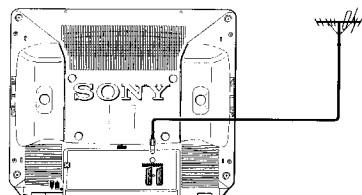
Reference and Symbol	Name	Refer to page
<b>1</b>	Muting on/off button	28
<b>2</b>	<b>VCR operation</b>	41
	Video equipment selector	41
	Video equipment operation buttons	41
	VIDEO CH +/-	
<b>3</b>	On-screen display button	28
<b>4</b>	Time display button	28
<b>5</b>	Teletext button	28, 37
<b>6</b>	TV power on/TV mode button	28
<b>7</b>	No function on this set	
<b>8</b>	Freeze button	28
<b>9</b>	PIP on/off button	36
<b>10</b>	PIP Swap button	36
<b>11</b>	PIP position button	36
<b>12</b>	PIP source selector	36
<b>13</b>	Double digit entering button	28
<b>14</b>	Sound mode button	34
<b>15</b>	Menu on/off button	29
<b>16</b>	Volume control buttons	28
<b>17</b>	Joystick for Menu selection	29
	Press to confirm selection (OK function)	
<b>18</b>	TV standby button	28
<b>19</b>	Output mode selector	40
<b>20</b>	Teletext: Reveal button	37
<b>21</b>	Input mode selector	28
<b>22</b>	Teletext: Freezing the subpage	37
<b>23</b>	Teletext: Favourite pages button	39
<b>24</b>	No function on this set	
<b>25</b>	Number buttons	28
<b>26</b>	Direct channel entering button	28
<b>27</b>	Picture mode button	34
<b>28</b>	Programme buttons	28
<b>29</b>	Teletext: Page up/page down buttons	37



## Step 1 Installation

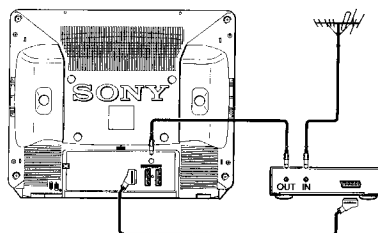
### A Connecting the Aerial

(If you connect a VCR, skip to step B)  
Insert the aerial plug of the supplied aerial cable tightly into the aerial socket **T** **K**.



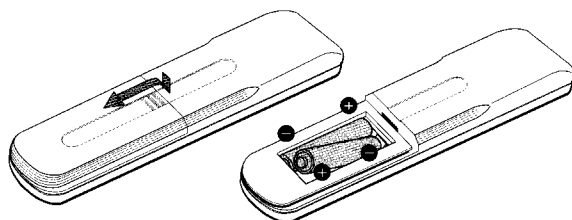
### B Connecting a VCR

We recommend that you tune in the VCR signal to the programme position »0«. Use the preset function »Manual Programme Preset« (page 29) to do this.



### C Inserting the batteries into the Remote Commander

Insert the batteries checking the correct polarities.



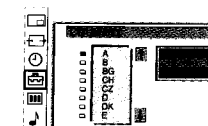
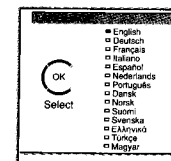
! Respect your environment! Dispose of used batteries in an environmental friendly way.

## Step 2 Basic Presetting

### A Choosing the Menu Language and the Country

Using this function you select the language of the menu screens. Also you select the country in which you will use the TV. In this way the channels of the selected country will automatically get the top positions during automatic presetting.

- 1 Press the power switch **1** on the TV. If the standby indicator **1** on the TV is lit, press **1** or a number button **2** on the Remote Commander. Press the MENU button **3** on the Remote Commander. The menu LANGUAGE appears.
- 2 Push the joystick **4** to blue or green to select the language. Press the joystick **4** to confirm your selection. The menu COUNTRY appears.
- 3 Push the joystick **4** to blue or green to select the country in which you wish to operate the TV. Press the joystick **4** to confirm the selection.
- 4 Press MENU **3** to restore the normal TV picture.



### B Presetting Channels Automatically

With this function the TV automatically searches and stores up to 100 channels onto programme positions. If you prefer »Manual Presetting of channels« please refer to page 29 in Advanced Operation.

- 1 Press MENU **3**.
- 2 Push the joystick **4** to blue or green to select the symbol **5** on the menu screen, then push to yellow.
- 3 Push the joystick **4** to blue or green to select »Auto Programme«, then push to yellow. The menu AUTO PROGRAMME appears.
- 4 a) All items shown on the menu screen are as wanted: Press joystick **4** to select START. Now the automatic channel presetting starts from programme position 1.  
or  
4 b) You wish to change items as shown on the menu screen: Push the joystick **4** to blue or green. Push to yellow repeatedly until the desired item is highlighted.

Push the joystick **4** to blue or green to select the following possibilities:

**ACI**  
(Automatic Channel Installation, depending on availability of service in your country)  
on: fast channel presetting by special networks using the channel frequency (e.g. F055)  
TV-system and station label  
off: ACI is not active, only ITP (Intelligent Tuner Preset)

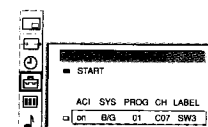
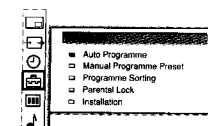
**SYS** (TV Broadcast System)  
B/G for Western European Countries  
D/K for Eastern European Countries

**PROG** (Programme Position)  
Presetting automatically starts from position 1.

**CH** (channel)  
C to start presetting with terrestrial channels  
S to start presetting with cable channels

Press the joystick **4** as soon as the automatic presetting should start.

After presetting the normal TV picture reappears.



Joystick







## Advanced Presetting

### 7a) Direct Input

For channel numbers you need to input a two digit number, for the frequency a three digit number.






- Push to blue or green to select the first digit of the channel number or frequency. Push to yellow to confirm.
- Push to blue or green to select the second digit of the number or frequency. Push to yellow to confirm. In case of the channel number the search starts.
- Push to blue or green to select the third digit of the frequency number. Push to yellow to start the search of the frequency.
- To continue search for another channel: Push to blue or green.
- To store the selected channel: Press the joystick .
- Repeat steps 4 to 7a) to preset other channels.


### 7b) Search

- Push repeatedly to yellow until a blue and a green arrow appear in the section SEARCH.
- Push to blue or green to search for the next available channel.
- To continue search for another channel: Push to blue or green.
- To store the selected channel: Press the joystick .
- Repeat steps 4 to 7b) to preset other channels.

## Captioning a Station Name

Channels are usually automatically labelled during presetting. You can, however, individually name a channel or a video source using up to five characters.

- 1 Press MENU .
- 2 Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
- 3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm.
- 4 Push to blue or green to select the programme position with the channel you want to label. Push to yellow repeatedly until the first element of the position LABEL is highlighted.
- 5 Push to blue or green to select a letter or a number (select »-« for a blank). Push to yellow to confirm. Select the other four characters in the same way.
- 6 After selecting all characters, press the joystick .
- 7 Repeat steps 4 to 6 to label other channels or video sources.
- 8 Press MENU  to restore the normal TV picture.








PROG	SYS	CH	SEARCH	LABEL
1	B/G	F175	on	ARD
2	B/G	C03	on	ZDF
3	B/G	C08	on	SWF
4	B/G	S10	on	RTL
5	B/G	F147	on	SAT 1
6	B/G	F203	on	RTL2
7	B/G	F251	on	PRO7
8	B/G	S03	on	ARRC

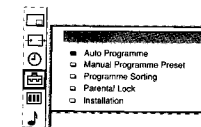

## Advanced Presetting

## Skipping Programme Positions

This function enables you to skip unused programme positions when selecting them with the PROGR +/- buttons. However, by using the number buttons you can still select the skipped programme position.

- 1 Press MENU .
- 2 Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
- 3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm.
- 4 Push to blue or green to select the programme position you want to skip. Push to yellow to confirm.
- 5 Push to blue or green to select »-« in the position SYS (system). Press the joystick  to confirm.
- 6 Repeat steps 4 and 5 to skip other programme positions.
- 7 Press MENU  to restore the normal TV picture.







### Joystick





PROG	SYS	CH	SEARCH	LABEL
1	B/G	F175	on	ARD
2	B/G	C03	on	ZDF
3	B/G	C08	on	SWF
4	B/G	C10	on	RTL
5	B/G	F147	on	SAT 1
6	B/G	F203	on	RTL2
7	B/G	F251	on	PRO7
8	B/G	S03	on	KAD

## Sorting Programme Positions

This function enables you to sort the programme positions to a preferable order.

- 1 Press MENU .
- 2 Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
- 3 Push to blue or green to select »Programme Sorting«. Push to yellow to confirm.
- 4 Push to blue or green to select the programme position of the channel you want to exchange. Press joystick  to confirm.
- 5 Push to blue or green to select the programme position of the second channel. Press joystick  to confirm. Now the two programme positions are swapped and sorted.
- 6 Repeat steps 4 and 5 to sort other programme positions.
- 7 Press Menu  to restore the normal TV picture.












PROG	CH	LABEL
1	F 175	ARD
2	C 20	ZDF
3	C 08	SWF
4	S 10	RTL
5	S 01	SAT
6	F 204	
7	S 03	

Move PR 4 to PR 1

## Using Parental Lock

This function enables you to prevent children watching undesirable broadcasts.

- 1 Press MENU .
  - 2 Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
  - 3 Push to green or blue to select »Parental Lock«. Push to yellow to confirm.
  - 4 Push to green or blue to select the channel you want to block. Press the joystick  to confirm. The symbol  appears before the programme position to indicate that this channel is now blocked.
  - 5 Repeat step 4 to block other channels.
  - 6 Press MENU  to restore the normal TV picture.
- ! To unblock: Select the channel to unblock in the menu »Parental Lock«. Press the joystick . The symbol  disappears.









PROG	CH	LABEL
1	C 03	ARD
2	C 04	
3	C 07	MRC
4	C 09	
5	C 11	
6	C 12	
7	C 13	
8	C 14	

## Advanced Presetting

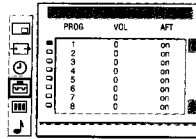
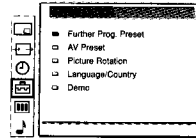
### Using »Further Programme Preset«

Using the menu »Further Programme Preset« you can

- individually adjust and store the volume level of each channel (Volume offset).
- in case of picture distortions use manual fine tuning to obtain a better picture quality. The factory setting is »on« for AFT (Automatic Fine Tuning).

- Press MENU .
- Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
- Push to blue or green to select »Installation«. Push to yellow to confirm.
- Push to blue or green to select »Further Programme Preset«. Push to yellow to confirm.
- Push to blue or green to select the programme position you want. Push to yellow repeatedly to select:
  - VOL (Volume Offset) or b) AFT (Automatic Fine Tuning). The selected item changes colour.
- 6a) VOL  
Push to blue or green to adjust the volume for the selected programme position within a range of -7 to +7. Press the joystick  to confirm. Repeat step 6 to set the volume level for other programme positions.
- b) AFT  
Push to blue or green to fine-tune the channel within a range of -15 to +15. Press the joystick  to confirm. Repeat step 6 to fine-tune other channels.
- Press MENU  to restore the normal TV picture.






Joystick



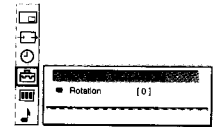
## Advanced Presetting

### Adjusting the Picture Rotation


If, due to the earth magnetism, the picture slants, you can use this function to readjust the picture.







- Press MENU .
- Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
- Push to blue or green to select »Installation«. Push to yellow to confirm.
- Push to blue or green to select »Picture Rotation«. Push to yellow to confirm.
- Push to yellow. Push to blue or green to adjust the picture rotation. The adjusting range is -4 to +4. Press the joystick  to confirm.
- Press MENU  to restore the normal TV picture.

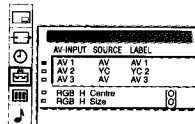
Joystick



### Using »AV Preset«

Using this function you can preset the desired input source (e.g. , RGB signal) to the respective AV input (AV1). In this way a connected VCR switches automatically to the RGB signal. Also you can label the input sources.

- Press MENU .
- Push joystick  to blue or green to select the symbol  on the menu screen. Push to yellow to confirm.
- Push to blue or green to select »Installation«. Push to yellow. Push to blue or green to select »AV Preset«. Push to yellow to confirm.
- Push to blue or green to select the desired AV input. Push to yellow to confirm.
- Push to blue or green to select the desired source. Push to yellow to confirm. For the respective AV inputs you have the following choice:  
AV1: RGB or AV  
AV2: YC2 or AV  
AV3: YC3 or AV
- To label a source: Push to blue or green to select the first character (letter or number, »-« for a blank). Push to yellow to confirm. Select the other four characters in the same way.
- Press the joystick  to store.
- Repeat steps 4 to 7 for the other AV inputs.
- For RGB input source only: Push to blue or green to select RGB H Centre.
  - Push to yellow to confirm.
  - Push to blue or green to adjust the centre of the picture in a range of -5 to +5. Press the joystick  to store.
  - Repeat step 9 to adjust RGB H Size.
- Press MENU  to restore the normal TV picture.



## Advanced TV operation

### Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

1 Press **Picture** (for Picture) or **Sound** (for Sound)

or  
Press **MENU**.

Push joystick to blue or green to select **Picture Control** or **Sound Control**. Push to yellow to confirm. The menu **PICTURE CONTROL** or **SOUND CONTROL** appears.

2 Push to blue or green to select the desired item. Push to yellow to confirm.

3 Push to red or yellow to adjust the selected item. Press the joystick to confirm. For the effect of each control, see the following tables.

4 Repeat steps 2 and 3 to adjust other items.

5 Press **MENU** to restore the normal TV picture.

Joystick

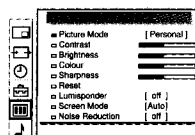


#### Picture Control

Item	Effect
Picture Mode	• Personal → Economy (energy saving setting) → Live → Sports → Movie → Game
Contrast	• Less ———   ——— More
Brightness*	• Darker ———   ——— Brighter
Colour*	• Less ———   ——— More
Hue**	• Greenish ———   ——— Reddish
Sharpness*	• Softer ———   ——— Sharper
Reset	• Resets picture to the factory preset levels
Lumispander	• Off: Normal On: Automatic optimization of picture level according to the surrounding lighting level
Screen Mode	• Auto (automatic selection of 16:9 broadcasts decoded in 4:3) → 16:9 → 4:3
Noise Reduction	• Off: Normal On: Reduction of picture noise in case of weak signals

\* Only if »Personal« or »Economy« is selected in »Picture Mode«.

\*\* Available for NTSC colour system only.



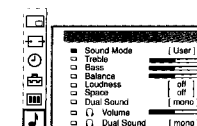
## Advanced TV operation

### Sound Control

Item	Effect
Sound Mode	• Choice between different sound effects User → Pop → Jazz → Rock
Treble*	• Less ———   ——— More
Bass*	• Less ———   ——— More
Balance	• More left ———   ——— More right
Loudness*	• Off: normal On: for music broadcasts
Space	• Off: normal On: special acoustic effect
Dual Sound	• A: channel 1 or B: channel 2 Stereo → Mono
Headphones	
Volume	• Less ———   ——— More
Dual Sound	• A: channel 1 or B: channel 2 → PIP (if PIP is switched on, you can select the PIP sound for the headphones) → Stereo → Mono

\* Only if »User« is selected in »Sound Mode«

Joystick



### Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

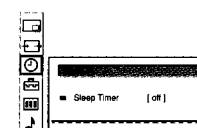
1 Press **MENU**.

2 Push joystick to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to yellow. Push to blue or green to select the time.  
OFF → 10 min → 20 min ..... 80 min → 90 min.  
Press the joystick to confirm.

4 Press **MENU** to restore the normal TV picture.

! One minute before the TV switches into standby mode, a message is displayed on the screen.





— 13 —

With this function you can display a »PIP screen« (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa.



### To switch PIP off

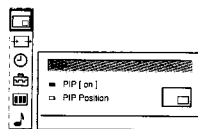
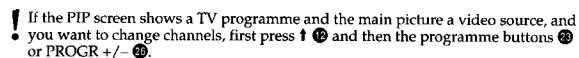
or

- ### Changing the position of the PIP

Press **↑** **12**.  
The symbol **↑12** will be displayed at the bottom, left-hand corner of the screen.  
Press **↺** **20** repeatedly until the desired source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

- If no video source has been connected, the PIP picture will be noisy.
- A RGB input source cannot be displayed in PIP.

Press **[2]/[4]** **[10]**.  
The main screen will switch the picture with the PIP screen.



Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) informs you about how to use the service. Make sure to use a TV channel with a strong signal, otherwise Teletext errors may occur.

### Switching Teletext on and off

- ## Joystick



### Direct Page Selection


If you have made a mistake: Type in any three digits, then reenter the correct page number.

1 Select a teletext page with page numbers (e.g. index page).

- 2 Press the joystick **17**. »Page Catching« is displayed at the top of the page.  
Push joystick **17** to blue or green to select the page you want. Press the joystick **17**.  
The requested page is displayed after some seconds.


Press **⏮** **26** (Page +) or **⏭** (Page -).

Press **⏏** **20**. The symbol **⏏** is displayed.

Press  **5** to resume normal teletext reception.

Press **2** **19**. Press again to cancel.

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke. When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue marks on the Remote Commander. Push the joystick  to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

continued &gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;:

## Teletext

### Using the Teletext Menu

Your TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the buttons for menu operation to operate the teletext menu. Select the teletext menu functions as follows:

- 1 Press MENU . The menu is superimposed on the teletext display.
- 2 Push the joystick to blue or green to select the teletext function you want. Push to yellow to confirm the selection.

#### USER PAGES/PRESET USER PAGES

See page 39 for information about presetting and operating the user pages.

#### INDEX

The index gives you an overview of the contents of the teletext you are using.

#### TOP/BOTTOM/FULL

For convenient reading of a teletext page you can enlarge the teletext page. After selecting the function, an information line »Top + Bottom OK Full« is displayed. Push joystick to green to enlarge the upper half, push to blue to enlarge the lower half. Press the joystick to resume the normal display. Press to resume normal teletext reception.

#### TEXT CLEAR

After selecting the function, you can watch a TV programme while waiting for a requested teletext page to be captured. When the page is available, the symbol changes colour. Press to view the requested page.

#### SUBTITLES

Check with your teletext service for information about subtitled TV programmes. After selecting the function the subtitles are displayed.

#### TIME PAGE

Check with your teletext service about the availability of time coded pages. If available, you can call up a page (e.g. an alarm page) at a certain time.

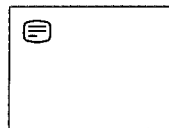
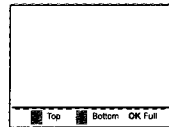
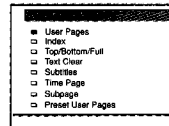
- 1 Select TIME PAGE in the teletext menu. Push joystick to yellow. An information window is displayed. Push to blue or green to select »On«. Push to yellow.
- 2 Use the number buttons to enter the three digits of the page you want (e.g. 301). Push to yellow after each digit.
- 3 Use the number buttons to enter the four digits of the desired time (e.g. 18-54). Push to yellow after each digit. Press joystick to confirm. Press MENU . The time is displayed in the top left-hand corner of the screen. At the requested time the page is displayed.

#### SUBPAGE

Using this function you can select a particular teletext page from several subpages (e.g. page 2 of 6 pages in total). After selecting the function an information line is displayed. Use the number buttons to enter the four digits (e.g. enter 0002 for the second page of a sequence).

To cancel the request: Press the number button »0« four times.

#### Joystick



## Teletext

### User Page Bank System

You can store up to 6 of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

#### Storing pages

- 1 Press to switch Teletext on. Press MENU .
- 2 Push joystick to blue or green to select »Preset User Pages«. Push to yellow to confirm.
- 3 Push to blue or green to select the bank (from A to E) you want. Push to yellow to confirm.
- 4 Push to blue or green to select the three digits of your first favourite page. Push to yellow after each digit. Push to yellow to confirm.
- 5 Repeat step 4 for the other 5 favourite pages. If you do not want to preset all 6 page numbers push to yellow without inserting any number. After finishing the presetting, press the joystick .
- 6 Push to blue or green to select »Allocate Bank«. Push to yellow to confirm.
- 7 Push to blue or green to select the programme position of the channel which carries the teletext service for which you have selected your favourite pages. Push to yellow to confirm.
- 8 Push to blue or green to select the bank from step 3. Press the joystick to confirm. Push to red.
- 9 Repeat steps 3 to 8 for the other 4 banks available.

#### Displaying User Pages

- 1 Press MENU .
  - 2 Push joystick to blue or green to select »User Pages«. Push to yellow to confirm.
  - 3 Push to blue or green to select the page you want. Press the joystick . The page is displayed after some seconds.
- or
- 1 Press .
  - 2 Push joystick to blue or green to select the page you want. Press the joystick . The page is displayed after some seconds.

#### Joystick



BANK	P1	P2	P3	P4	P5	P6
A	300	255	456	234	200	178
B	200	120	301	303	250	345
C	100	220	300	444		
D	128	321	255			
E	400	238	240	118	127	

PROG.	LABEL	BANK	PROG.	LABEL	BANK
00	VHS	-	04	MTV	D
01	BBC1	A	05	SKY	B
02	BBC2	C	06	ITV	C

PAGE	200	201	202	203	204	205
00	PAGE 200					
01	PAGE 201					
02	PAGE 202					
03	PAGE 203					
04	PAGE 204					
05	PAGE 205					

## Optional Equipment

### Connecting Optional Equipment

You can connect a wide range of optional equipment to your TV. Refer to the illustrations on the back lap page of this Instruction Manual.

Symbol	Acceptable input signals	Available output signals
1	Normal audio/video and RGB	Audio/video from TV tuner
2/2	Normal audio/video and S video	Audio/video from selected source
3, 3	Normal audio/video and S video	No output

#### About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

#### Tips:

- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

### Selecting Input and Output Signals

#### a) Direct Access Buttons

##### Selecting the Input

Press **2/2** repeatedly to select one of the following input modes:

Symbol on the screen	Input signals	
1	Audio/video through Euro AV connector	J
2	RGB through Euro AV connector	J
2	Audio/video through Euro AV connector	L
2	S video through Euro AV connector	L
3	Audio/video through the phono jacks	C
3	S video through the 4 pin DIN	B

Press **1** to restore the normal TV picture.

##### Selecting the Output from Euro AV connector **2/2**

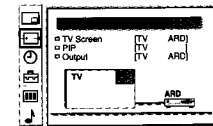
Press **2/2** repeatedly to select one of the following output sources for the connector **2/2**:

Symbol on the screen	<b>2/2</b> connector output signal	
1	Audio/video from Euro AV connector	J
2	Audio/video from Euro AV connector	L
2	Audio/video from Euro AV connector	L
3	Audio/video from the phono jacks	C
3	Audio/video from the 4 pin DIN	B
TV	Audio/video from the aerial terminal T	K

## Optional Equipment

### b) Using the Menu »Video Connection«

- 1 Press MENU **1**.
- 2 Push joystick **1** to blue or green to select the symbol **2/2** on the menu screen. Push to yellow to confirm.
- 3 Push to blue or green to select »TV screen« (input source for TV-screen), PIP (source for PIP screen), or »Output« (output source for **2/2**). Push to yellow to confirm.  
You can select between the following sources:  
• TV: TV-tuner • YC: S video signal • AV: Audio/Video  
TV screen: TV, AV1, RGB, AV2, YC2, AV3, YC3  
PIP: TV, AV1, AV2, YC2, AV3, YC3  
Output: TV, AV1, AV2, YC2, AV3, YC3
- 4 Push to blue or green to select the desired source. Press joystick **1** to store.
- 5 Press MENU **1** to restore the normal TV picture.



#### Joystick



### Remote Control of other Sony Equipment

Using the buttons **2** on the Remote Commander you can control other Sony equipment.

- 1 Set the selector VTR 1 2 3 MDP according to the equipment you want to control.  
VTR 1: Beta VCR  
VTR 2: 8mm VCR  
VTR3: VHS VCR  
MDP: Video Disk Player
- 2 Use the buttons **2** on the Remote Commander to operate the equipment.

#### Tips

- If your video equipment has a COMMAND MODE selector, set this selector to the same position as the VTR 1 2 3 MDP selector on the TV Remote Commander.
- If the equipment does not have a certain function, the corresponding button on the Remote Commander does not work.

## Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none"> <li>• Plug the TV in.</li> <li>• Press  on the TV. (If  is on, press  or a programme number  on the Remote Commander.)</li> <li>• Check the aerial connection.</li> <li>• Check if the selected video source is on.</li> <li>• Turn the TV off for 3 or 4 seconds and then turn it on again using .</li> </ul>
Poor or no picture (screen is dark), but good sound	<ul style="list-style-type: none"> <li>• Press  to enter the PICTURE CONTROL menu and adjust »Brightness«, »Contrast« and »Colour«.</li> </ul>
Poor picture quality when watching an RGB video source	<ul style="list-style-type: none"> <li>• Press  repeatedly to select .</li> </ul>
Good picture but poor or no sound	<ul style="list-style-type: none"> <li>• Press .</li> <li>• If  is displayed on the screen, press .</li> </ul>
No colour for colour programmes	<ul style="list-style-type: none"> <li>• Press  to enter the PICTURE CONTROL menu, select RESET, then press joystick .</li> </ul>
Remote Commander does not function.	<ul style="list-style-type: none"> <li>• Replace batteries.</li> </ul>

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

## Channel Guide

	Receivable Channels	Channel Displays
B/G/H	E2 .. 12, 21 .. 69	C02 C03 C04 .. C12 C21 .. C69
CABLE TV (1)	S1 .. 41	S01 S02 .. S41
CABLE TV (2)	S01 .. S05, M1 .. M10, U1 .. U10	S42 .. S46 S01 .. S10 S11 .. S20
ITALIA	A B C D E F G H H1 H2	C13 C14 C15 C16 C17 C18 C19 C20 C11 C12
D/K	R01 .. R12, R21 .. R69	C01 .. C12 C21 .. C69
CABLE TV (1)		S01 S02 .. S41
CABLE TV (2)		S42 S43 .. S46

## For Your Safety

Televisions operate on extremely high voltages. To prevent fire or an electric shock, please follow the safety procedures below. For your own safety, never open the cabinet. Refer servicing to qualified personnel only.

### For General Safety

- Do not expose the TV to rain or moisture.
- Do not open the rear cover.

### For Safe Installation

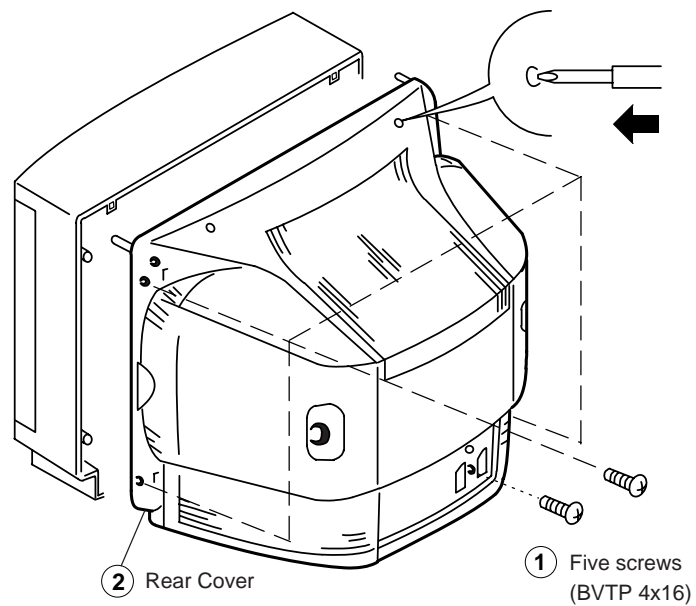
- Do not block or cover the ventilation openings. For ventilation, leave a space of at least 5 cm all around the set.
- Do not install the TV in hot, humid, or excessively dusty places.
- Do not install the TV where it may be exposed to mechanical vibrations.

### For safe operations

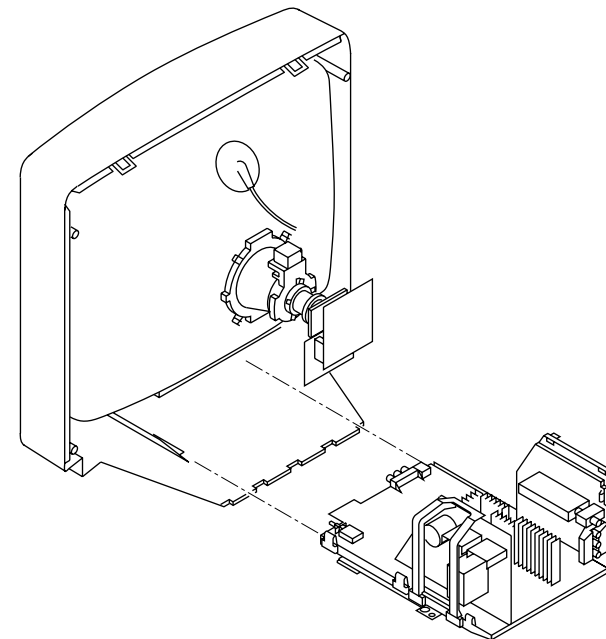
- Do not operate the TV on anything but 220 - 240V AC, 50 Hz.
- Unplug the TV if any liquid or solid object falls in it. Have it checked immediately!
- Unplug the TV if you are not going to use it for several days.
- When unplugging the TV, pull it out by the plug. Do not pull on the power cord!

## SECTION 2 DISASSEMBLY

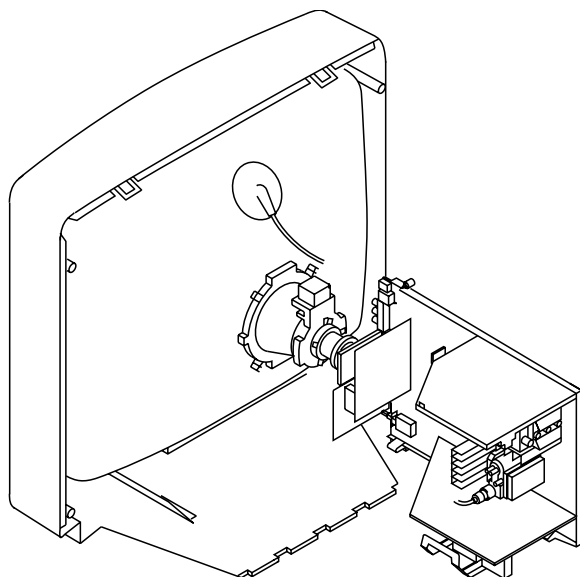
### 2-1. REAR COVER REMOVAL



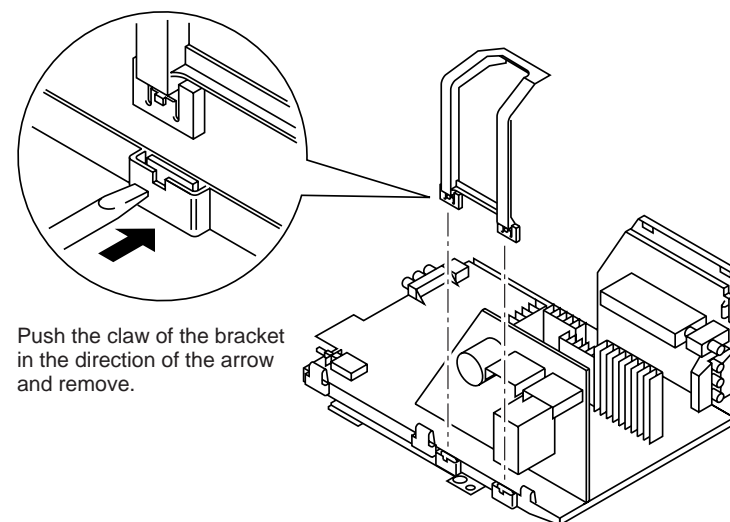
### 2-2. CHASSIS ASSY REMOVAL



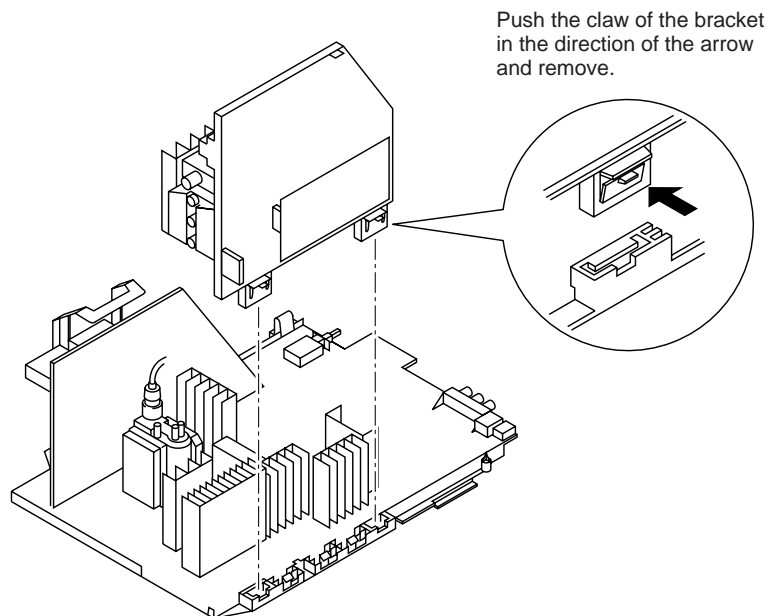
### 2-3. SERVICE POSITION



### 2-4. G BOARD REMOVAL



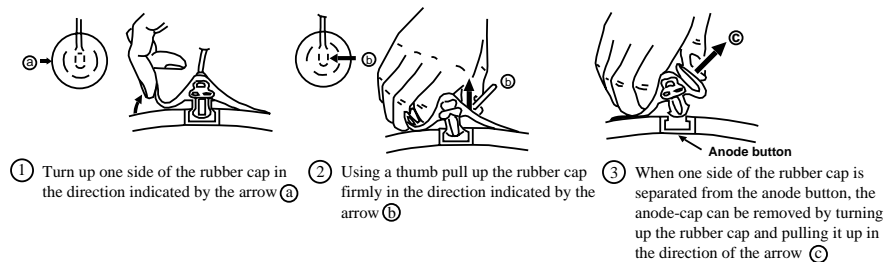
## 2-5. A BOARD REMOVAL



## • REMOVAL OF ANODE-CAP

**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

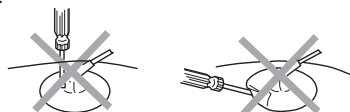
### \* REMOVING PROCEDURES.



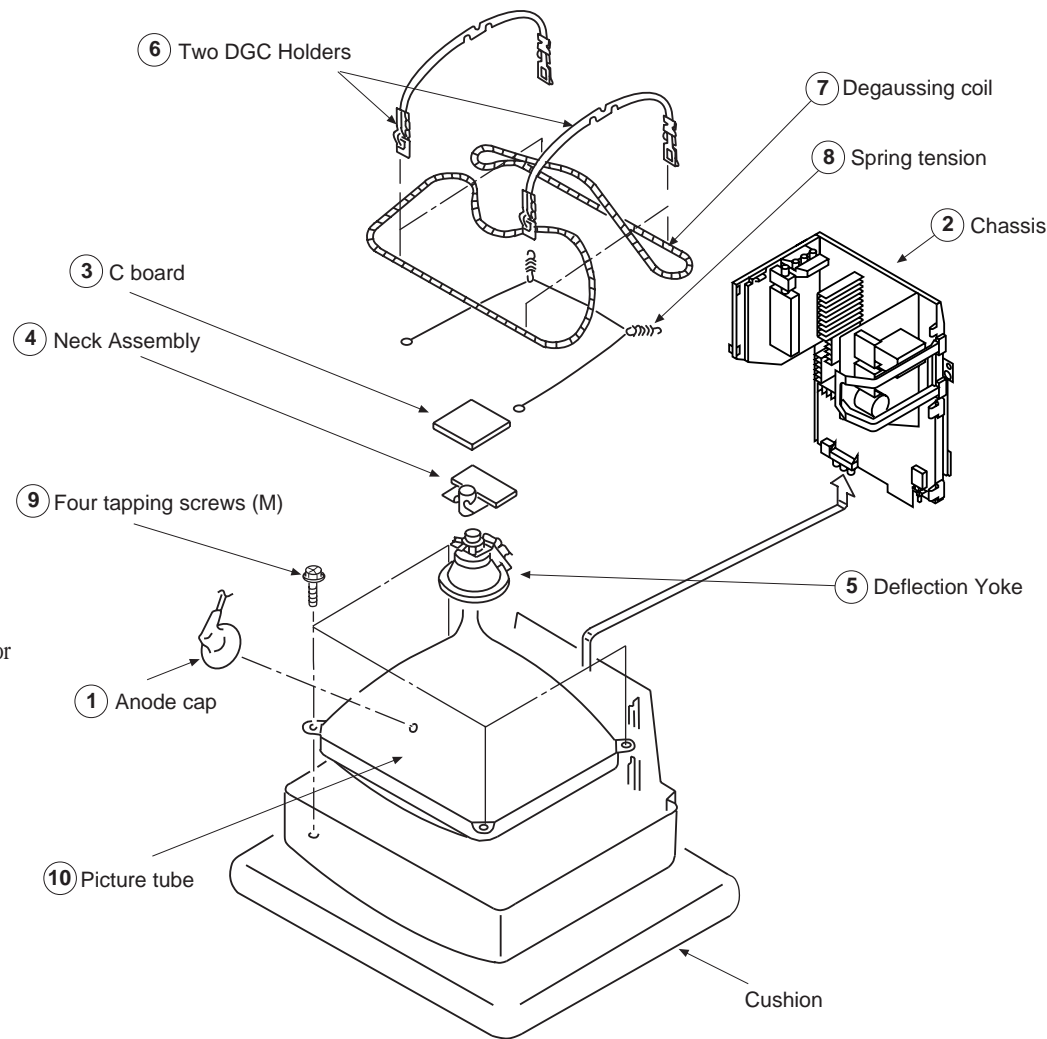
### • HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardy not to hurt inside of anode-caps !  
A metal fitting called a shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardly !

The shatter-hook terminal will stick out or damage the rubber.



## 2-6. PICTURE TUBE REMOVAL

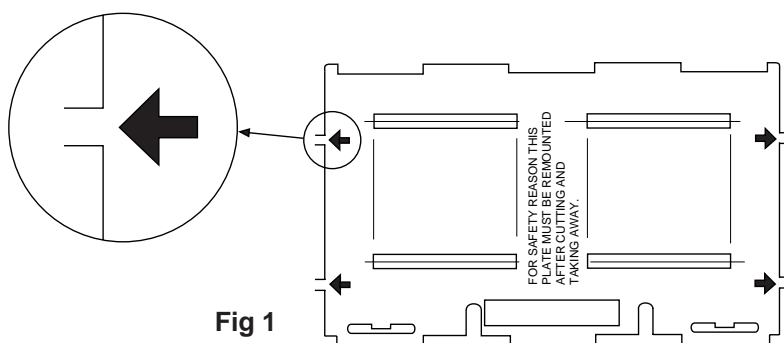


## REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

### (1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

**Note :** There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.



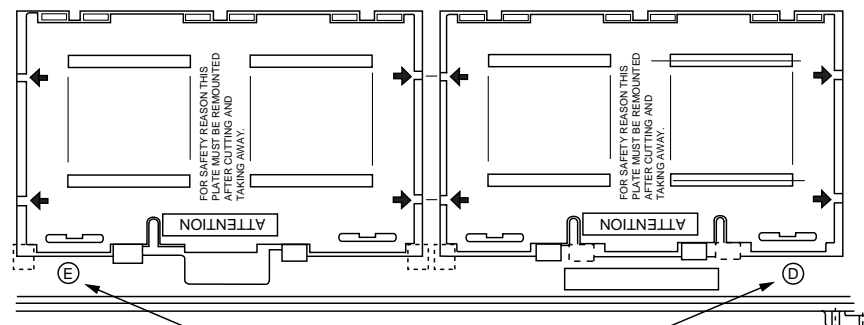
For safety reasons, on no account should the plates be removed and not refitted after servicing.

### (2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.

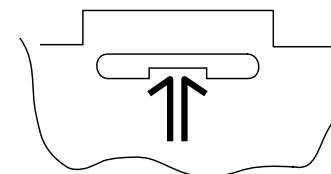
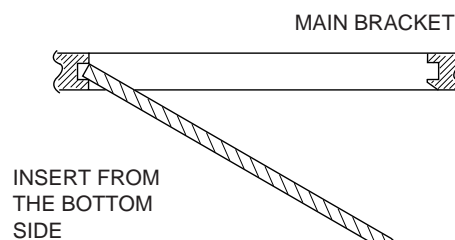
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.



INDEX MARKING  
AT BRACKET FRAME

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.



## SECTION 3

### SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustment with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches as follows.

Contrast ..... normal

Brightness ..... normal

- Carry out the following adjustments in this order:

3-1. Beam landing

3-2. Convergence

3-3. Focus

3-4. White balance

Note: Testing equipment required.

1. Color bar/pattern generator

2. Degausser

3. Vector scope

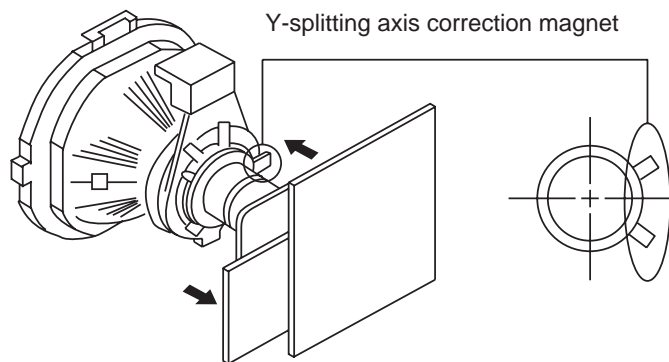
### 3-1. BEAM LANDING

#### Preparation:

1. In order to reduce the influence of geomagnetism on the set's picture tube face it in an easterly or westerly direction.
2. Switch on the set's power and degauss with the degausser.

#### (1) Adjustment of Correction Magnet for Y-Splitting Axis

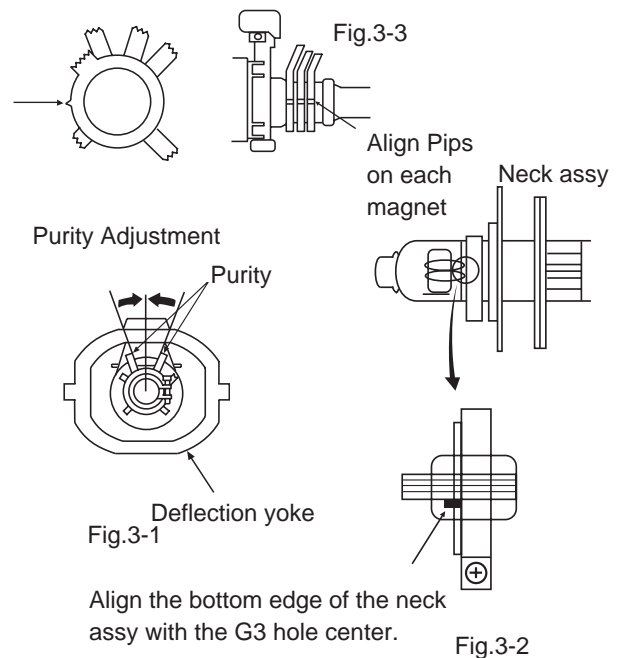
1. Input a crosshatch signal from the pattern generator.
2. Picture control is minimum and brightness control is still normal.
3. Position the neck assy as shown in Fig. 3-2.
4. Move the deflection yoke forward to touch the CRT and it stands up rightly.
5. Adjust the upper pin and the lower pin symmetrically by opening or closing the Y-splitting axis correction magnets on the neck assy.
6. Return the deflection yoke to its original position.



### (2) Landing

**Note:** Before carrying out the following adjustments adjust the magnets as indicated below (See Fig.3-3).

1. Input an all-white signal from the pattern generator. Maximize the picture setting and adjust the brightness setting.
2. Rough-adjust the focus and horizontal convergence.
3. Loosen the deflection yoke screws, align the purity adjustment knob to the central position. (See Fig. 3-1)
4. Switch from the all-white pattern to an all-green pattern.
5. Move the deflection yoke backwards and adjust with the purity magnet so that the green is at the center and it aligns symmetrically. (See Fig. 3-4)
6. Move the deflection yoke forward and adjust so that entire screen becomes green.
7. Switch the raster signal to red, then to blue and verify the landing condition.
8. When the position of the deflection yoke has been determined, fasten the deflection yoke with the screw.
9. If the beam does not land correctly in all the corners, use magnets to correct it. (See Fig. 3-5)





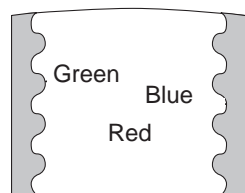


Fig.3-4

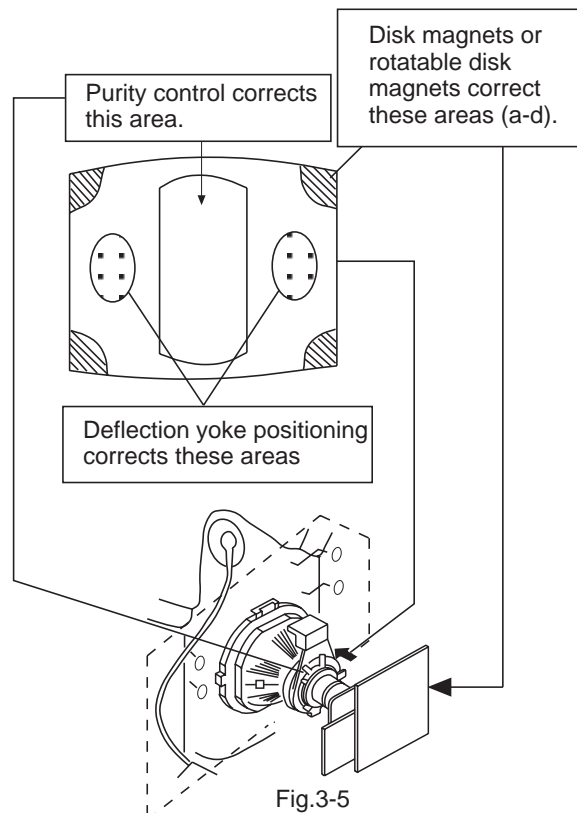
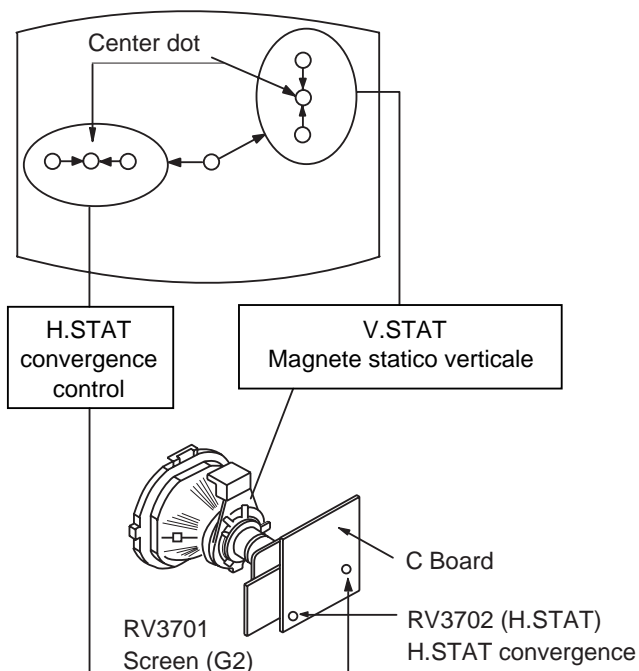


Fig.3-5

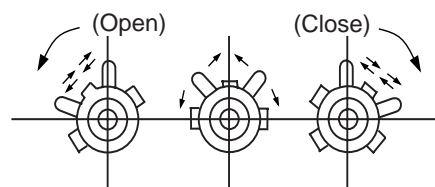
## 3-2. CONVERGENCE

### (1) Screen center convergence (Static convergence)

1. Input a dot signal from the pattern generator. Normalize the picture setting.
2. (Moving horizontally), adjust the H.STAT control so that the horizontal red, green and blue dots coincide at the center of screen.
3. (Moving vertically), adjust the V.STAT magnet so that the vertical red, green and blue points coincide at the center of screen.

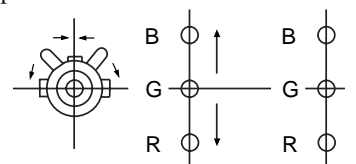


- If the horizontal dots are unable to coincide with the variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking. (Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)

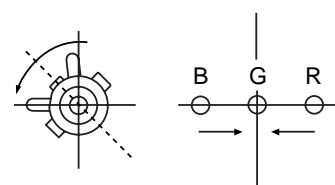


4. Movement of the red, green and blue dots by tilting the V.STAT magnet and by opening or closing the V.STAT magnet.

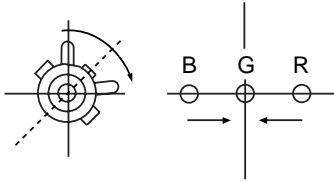
- ① By opening or closing the V.STAT magnet, the red, green and blue points move as shown below



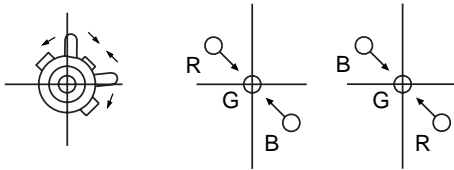
- ② By rotating the V. STAT magnet counterclockwise, the red, green and blue dots move as shown below.



- ③ By rotating the V.STAT magnet clockwise, the red, green and blue dots move as shown below.



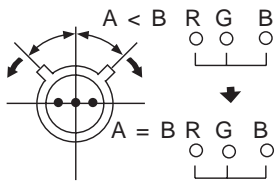
- ④ By opening or closing the V.STAT magnet, the red, green and blue dots move as shown below.



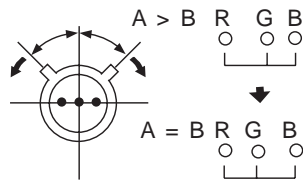
- If the blue dot does not coincide with the red and green points, correct the points by using the BMC (Hexapole) magnet.
- ⑤ Correction for HMC (horizontal mis-convergence) and VMC (vertical mis-convergence) by using the BMC (Hexapole) magnet.

- ① HMC correction by BMC (Hexapole) magnet and movement of the electronic beam.

HMC correction(A)

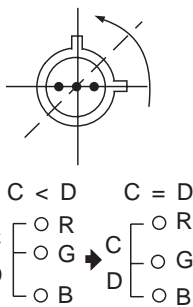


HMC correction(B)

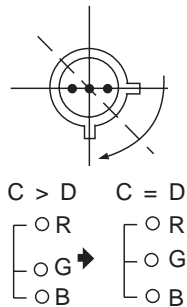


- ② VMC correction by BMC (Hexapole) magnet and movement of the electronic beam.

VMC correction(A)



VMC correction(B)



#### Layout of each control

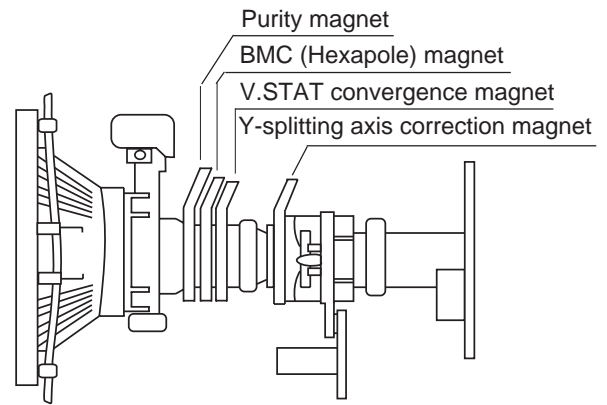
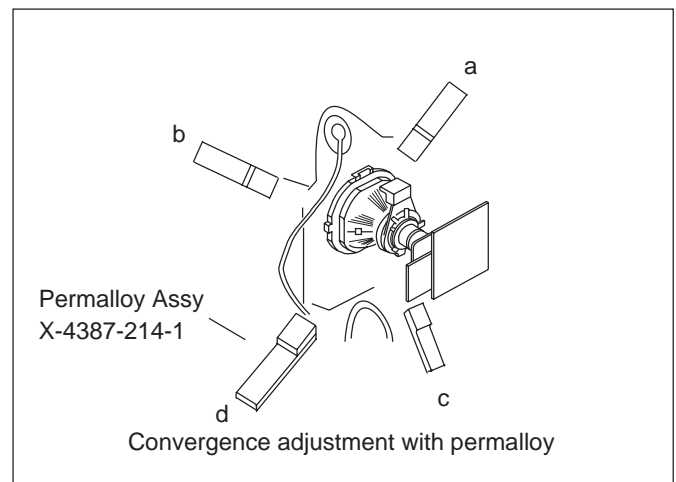
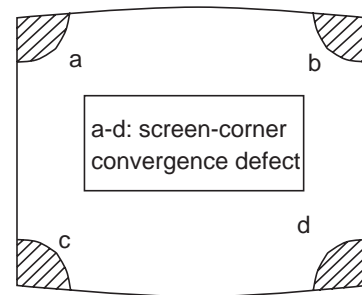


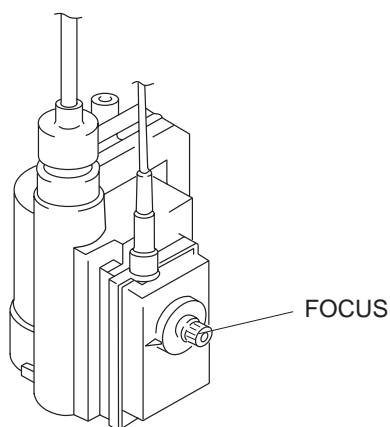
Fig.3-6

5. If you are unable to adjust the corner convergence properly, correct them with the use of permalloys.



### 3-3. Focus

1. Receive a television broadcast signal.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer for the best focus at the center of the screen.  
Bring only the center area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



### Video Proc. TDA4780

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	OFF
14	DELAY	OFF

### 3-4. Screen (G2), White balance (Adjustment in the service mode with remote commander)

#### G2 adjustment (RV3701)

1. Input a dot signal from the pattern generator.
2. Set the Picture, Brightness and Colour to minimum.
3. Apply 170V DC from an external power supply to the R, G and B cathodes of the CRT.
4. While watching the picture, adjust the G2 control RV3701 [ SCREEN ] on the C board to the point just before the return lines disappear.

#### White balance adjustment

1. Receive an all-white signal.
2. Enter into the Service Mode by pressing ' TEST ', ' TEST ' and ' MENU ' on the Service Commander.
3. Select ' VIDEO PROC. ' from the on screen menu display and press OK .
4. The ' VIDEO PROC TDA4780 ' menu will appear on the screen.

5. Set picture to MAX.
6. Set the ' R GAIN ' to 25.
7. Adjust the ' G GAIN ' and ' B GAIN ' so that the white balance becomes optimum.
8. Press the OK button to write the data for each item.
9. Set picture to MIN.
10. Set the ' R LVL REF ' to 40.
11. Adjust ' G LVL REF ', and ' B LVL REF ' with the left and right buttons so that the white balance becomes optimum.
12. Press the OK button to write the data for each item.

## SECTION 4

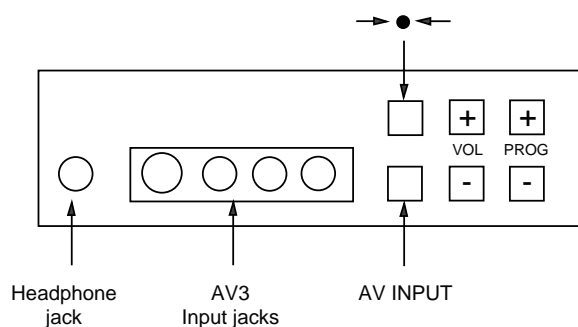
### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-862.

##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing the PROG + (plus) and PROG - (minus) buttons on the front panel.



2. "TT" will appear on the upper right corner of the screen.
3. Press "MENU" on the commander to get the service menu on screen.

##### DEVICES

Init TV	
Pip, Lumisponder & Autoside	
Sub Adjust	
Video Proc	TDA4780
Col Dec Main	TDA9144
Deflect. Cont	SDA9361
Col Dec Sub	TDA9143
Feature Box	S87C654
AI	TDA9170
DA	SDA9280
Single PIP	SDA9288
Sound	
Line23 det	

4. Push the joystick up (green) or down (blue) on the remote commander to select the adjustment item.
5. Press the center button to proceed to the next menu.
6. If the adjustment item is 'Video Proc.', push the down button to move to 'Video Proc.'.
7. The Menu as indicated in Fig 4-3 will appear on the screen.
8. Move the joystick up or down to move to the adjustment item and press the center (OK) button.
9. Change the data in order to comply with each standard.

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	ON
14	DELAY	OFF
15	DATA BUFF	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DIS	OFF
21	FSW 2	OFF
22	FSW 1 DIS	OFF
23	FSW 1	OFF
24	ADAPT BLACK	OFF
25	Y HIGH 1V	OFF
26	MOD2	OFF
27	BLUE STRETCH	OFF
28	VM OUT	OFF
29	PEAK DRV ABS	ON
30	TIME CNST PEAK LIMIT	OFF

Fig. 4-3

## SDA9361 Def. Cont.

Item No	Adjustment item	Data Amount
1	HDE	ON
2	VR	0
3	RABL	ON
4	Blk Dis	OFF
5	2FH 2xLine Frq	ON
6	Standby Mode	OFF
7	Vertical	ON
8	BSE Blk Select	OFF
9	SSE Start Scan	OFF
10	SRSE Start Red Scan	OFF
11	GBE Guard Board	OFF
12	STE Scan time table	OFF
13	NSA Self Adaption	ON
14	V Shift	Adj
15	V Bite	Adj
16	V Lin	Adj
17	V S-Cor	Adj
18	V Eht Comp	110
19	H Size	Adj
20	Pin Phase	Adj
21	Pin Amp	Adj
22	Up Cor Pin	Adj
23	Low Cor Pin	Adj
24	H Eht Comp	100
25	H Shift	Adj
26	V Angle	Adj
27	V Bow	Adj
28	PWM Start	0

Item No	Adjustment item	Data Amount
29	D/A	0
30	V Blk time	28
31	H Blk time	41
32	Start V Scan	0
33	H Blk phase	61
34	V Scan width 0	0
35	V Scan width 1	0
36	Guard Band	0
37	Start red scan	0
38	Number fields	1
39	NI Non Interlace	OFF
40	NR Vsync Noise Red	OFF
41	SSC with VBL	ON
42	Min lines/field	0
43	Max lines/field	0
44	AFC EHT comp	0
45	PLL Freq	6
46	VCR	ON
47	Gen Mode	OFF
48	HSWID	ON
49	Int H phase	7
50	PWM width	0
51	Noisy VCR	OFF
52	Killzip	OFF
53	tc3rd	OFF
54	Bandgap4 off	OFF
55	Bandgap off	OFF
56	Bandgap	0

## TDA4780 (VIDEO PROC.)

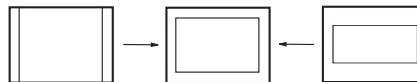
Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON = SLEV OFF = 2LEV	ON
14	DELAY	OFF
15	DATA BUFF	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DIS	OFF
21	FSW 2	OFF
22	FSW 1	OFF
23	FSW 1	OFF
24	ADAPT BLACK	ON
25	Y HIGH 1V	OFF
26	MOD2	OFF
27	BLUE STRETCH	Before W/B Adj:OFF After W/B Adj:ON
28	VM OUT	OFF
29	PEAK DRV ABS	ON
30	TIME CNST PEAK LIMIT	OFF

### DEFLECTION SYSTEM ADJUSTMENT

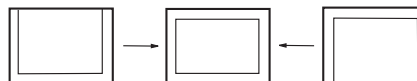
1. Enter into the service mode and select 'Deflect cont.'.The 'Deflect cont. SDA9361' adjustment menu will be displayed.
2. Select and adjust each item in order to get an optimum image.

Item No	Adjustment item	Data Amount
1	HDE	ON
2	VR	0
3	RABL	ON
4	Blk Dis	OFF
5	2FH 2xLine Frq	ON
6	Standby Mode	OFF
7	Vertical	ON
8	BSE Blk Select	OFF
9	SSE Start Scan	OFF
10	SRSE Start Red Scan	OFF
11	GBE Guard Board	OFF
12	STE Scan time table	OFF
13	NSA Self Adaption	ON
14	V Shift	Adj
15	V Bite	Adj
16	V Lin	Adj
17	V S-Cor	Adj
18	V Eht Comp	110
19	H Size	Adj
20	Pin Phase	Adj
21	Pin Amp	Adj
22	Up Cor Pin	Adj
23	Low Cor Pin	Adj
24	H Eht Comp	100
25	H Shift	Adj
26	V Angle	Adj
27	V Bow	Adj
28	PWM Start	0

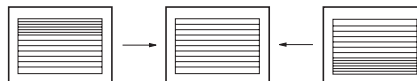
V SIZE



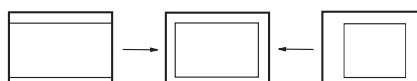
V POS



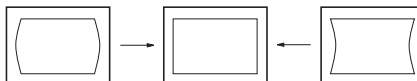
V LIN



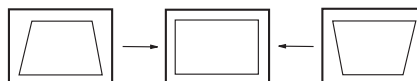
H SIZE



H PIN CUSH



H TILT



H UP COR



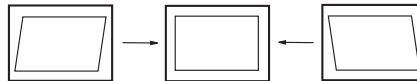
H LOWER COR



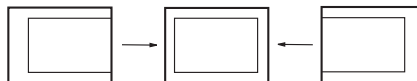
AFC V BOW



AFC V ANGLE



H POS



## 4-2. VOLUME ELECTRICAL ADJUSTMENTS

### Sub Brightness Adjustment

1. Enter Service Mode (Device Menu).
2. Select 'SUB ADJUST MENU'.

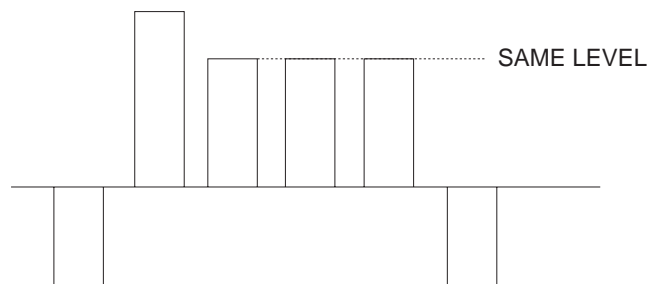
#### Sub adjustment

Sub Picture  
Sub Color  
Sub Brightness  
4/3 Center  
PAP H-Center  
PAP HWE-Offset

3. Adjust the value according to the following advice.

### Sub Color Adjustment

1. Input a PAL color bar signal.
2. Connect an oscilloscope to CN3703.
3. Enter into 'SERVICE MODE'.
4. Choose 'SUB ADJUST'.
5. Enter into Sub Color mode.
6. Adjust data so that the right sides of the waveforms are of equal height.





### 4-3. TEST MODE 2:

Is available by pressing the Test button twice, OSD "TT" appears. The functions described below are available by pressing the two numbers. To release Test Mode 2, press 0, 10, 20 ... twice or switch the TV into Standby Mode. Pressing the two Local Control buttons (+ and -) during Power ON will also switch into "TT" mode.

In TT mode, it is possible to remove the Menu from the screen by pressing the Speaker Off button once. Pressing the Speaker OFF button a second time will cause the menu to reappear. The Function is kept even when the menu is not displayed!!

00	Switch back to normal mode - TT mode off
01	Switch service menu on
02	Direct access to Noise reduction
03	Set volume to 30%
04	Service menu in "Service Mode"
05	Service menu in "Production Mode"
06	Set Volume to 80%
07	Aging Mode
08	Shipping Condition
09	Language Reset
10	The TT number will be deleted
11	Direct access to Balance
12	Direct access to Hue
13	Display of TV set configuration
14	Production Info Display
15	Read Analog from ROM
16	Save Analog F in NVM
17	This function presets the Labels for the AV sources: AV1, RGB, AV2, YC2, AV3, YC3, AV4, YC4.
18	No function
19	No function
20	See TT10
21	Picture Rotation automatic function: (-4) -> (+4) -> 0
22	Error Monitor Display
23	Direct access to Sub Brightness Adjustment.
24	Direct access to Sub Colour.
25	Status Menu Display
26	Text Character selection (Char set 06 -> West Europe)
27	Text Character selection (Char set 38 -> East Europe)
28	Text Character selection (Char set 40 -> West Europe) US English
29	Text Character selection (Char set 55 -> West Europe) Turkish
30	See TT10

31	no function
32	no function
33	no function
34	no function
35	no function
36	no function
37	no function
38	Screen Position
39	Reset Programme Table
40	See TT10
41	Picture Min
42	no function
43	no function
44	no function
45	Set NVM to Protect mode
46	IR Channel Presetting Mode. The channel presetting can be done by a Special transmitter. Sequence: TT46 -> --PR Number select display appears Select Prog. No. from where the channel shall be stored. --> Now TV is waiting for IR sequence <-- --> If no IR transmission starts TT46 is released after 20 secs <--! Note: when TT46 is active, any transmission will be interpreted as PROG data !
47	no function
48	no function
49	New Initialize
50	See TT10
51	Strobo mode is activated.
52	no function
53	no function
54	Direct access to Velocity Modulation VM (Production use)
55	Slicer High
56	Slicer No
57	Megatext Service Menu on
58	MTX Small Framing Code Window

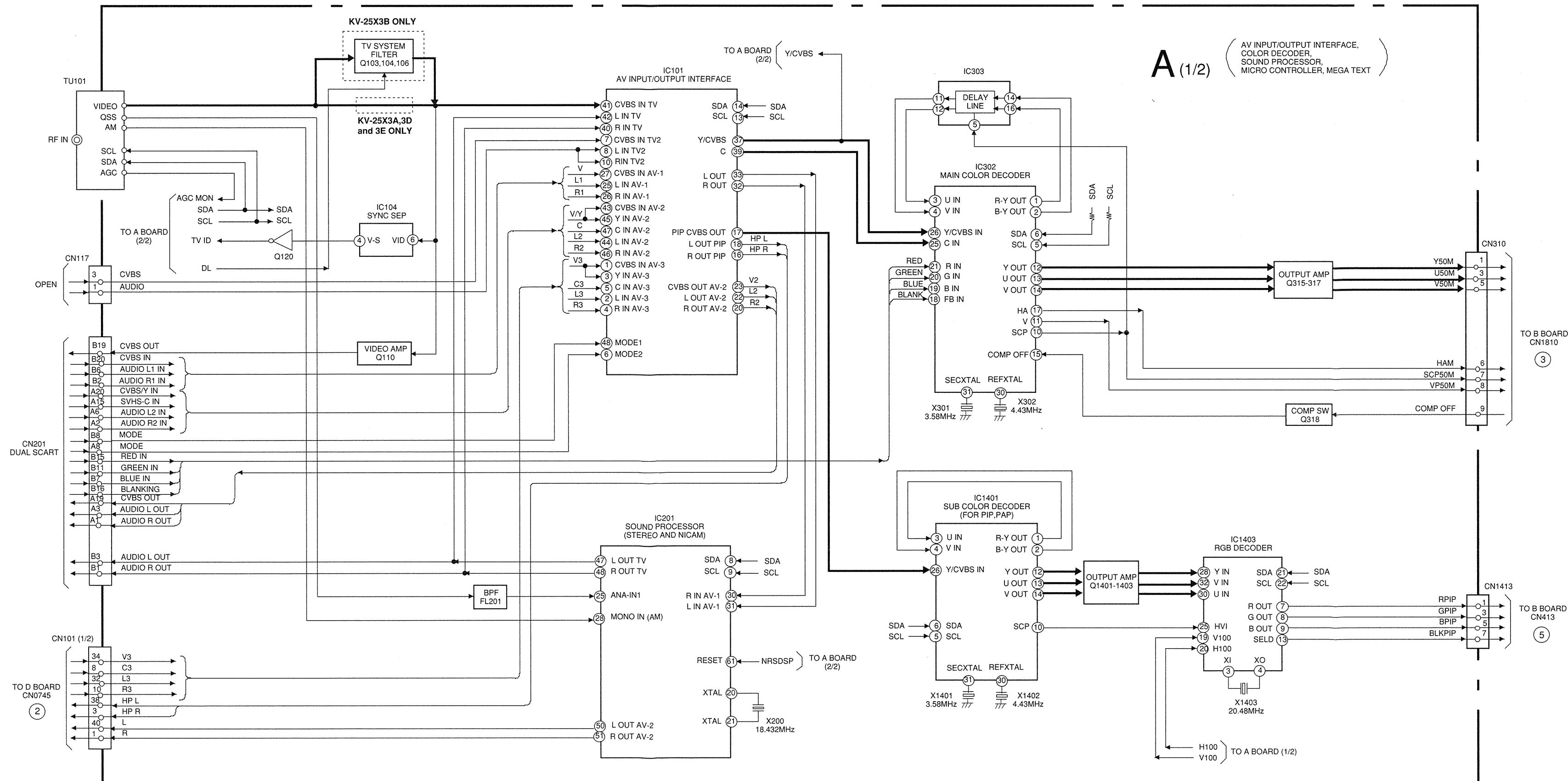
59	MTX Wide Framing Code Window
60	See TT10
61	no function
62	no function
63	no function
64	Reset all IIC Slave commands (Production use)
65	Reset stored error codes in NVM
66	Feature box and Pal Plus
67	no function
68	Ignore Errors - on
69	Ignore errors - off
70	See TT10
71	no function
72	no function
73	Megatext RGB textlevel one step decreased.
74	Megatext RGB textlevel one step decreased (max 1 steps down starting from E0h) (Production use)
75	no function
76	CDA9360
77	SDA9280
78	PIP
79	no function
80	See TT10
81	S87C654 Default data setting
82	TDA9170 Default data setting
83	SAA 7185WP Default data setting
84	TDA4780 Default data setting
85	TDA9144 Default data setting
86	TDA9143 Default data setting
87	SDA9288 Default data setting
88	Char set Russian
89	Char set Russian (esc)
90	See TT10

SECTION 5  
DIAGRAMS

KV-25X3

KV-25X3

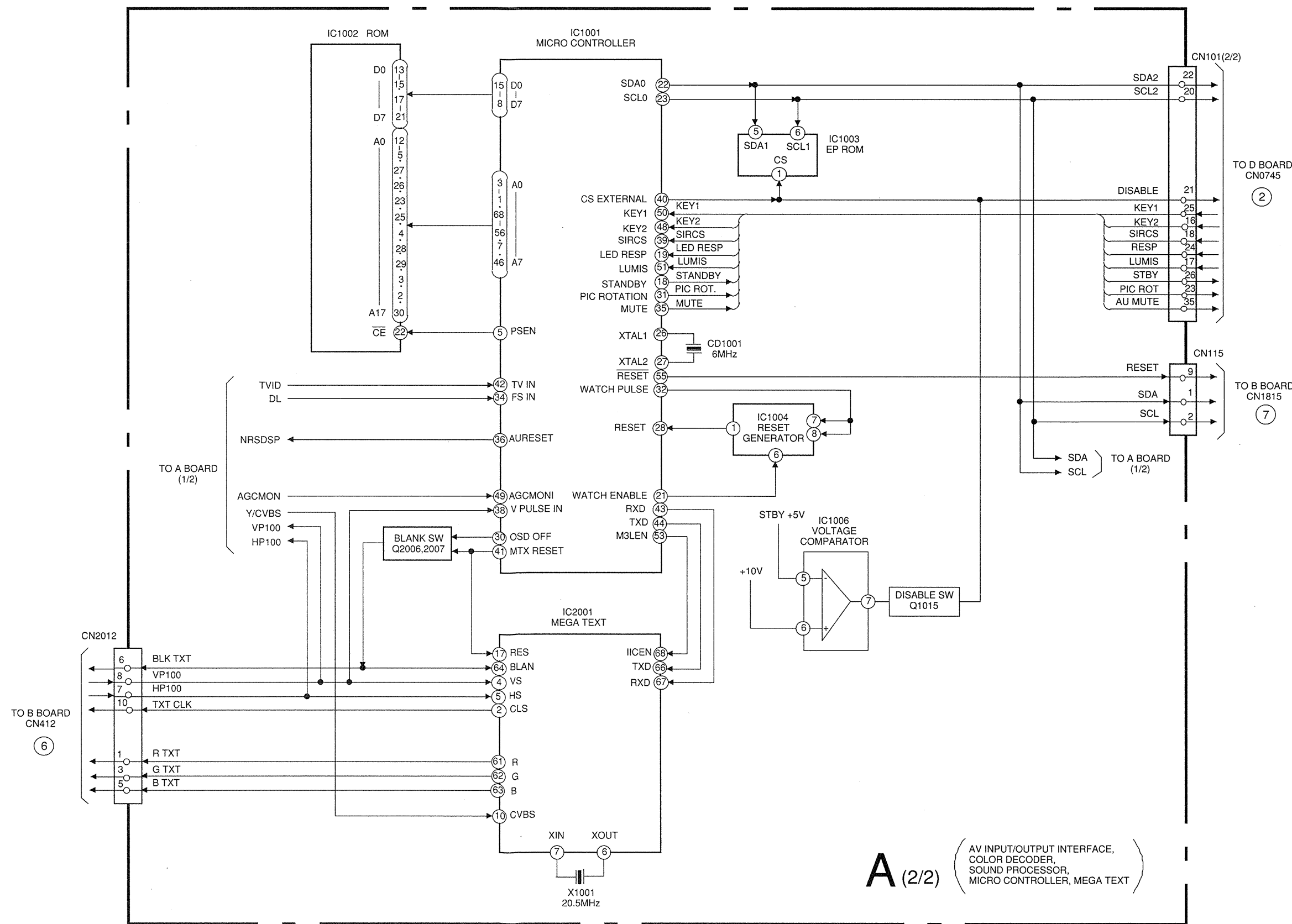
BLOCK DIAGRAM (1)

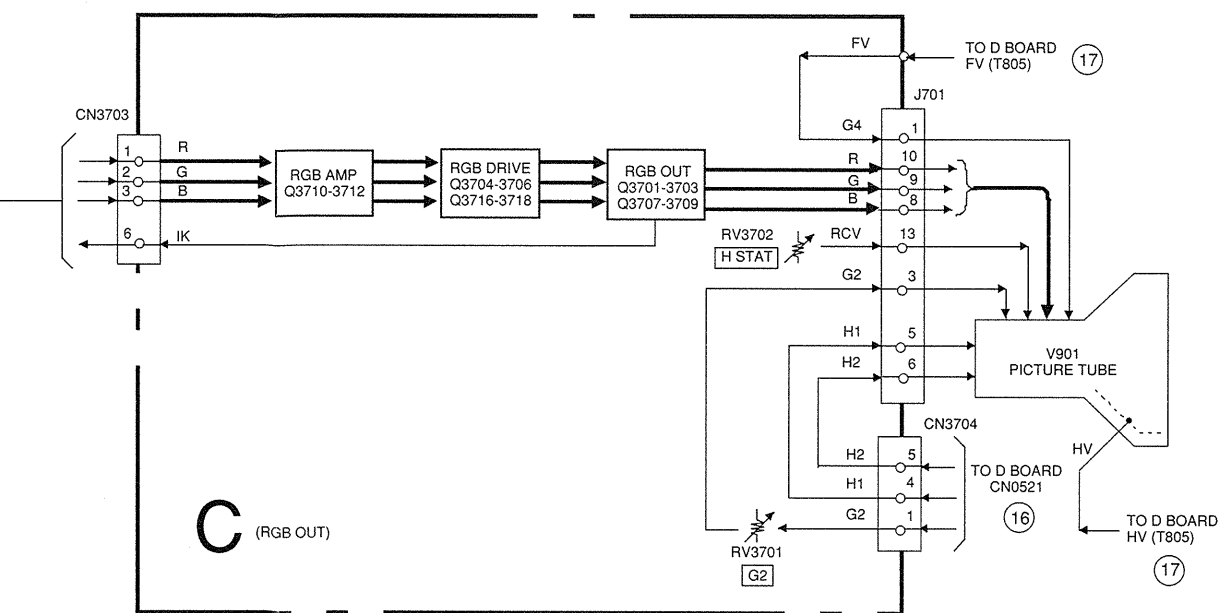


KV-25X3

KV-25X3

BLOCK DIAGRAM (2)

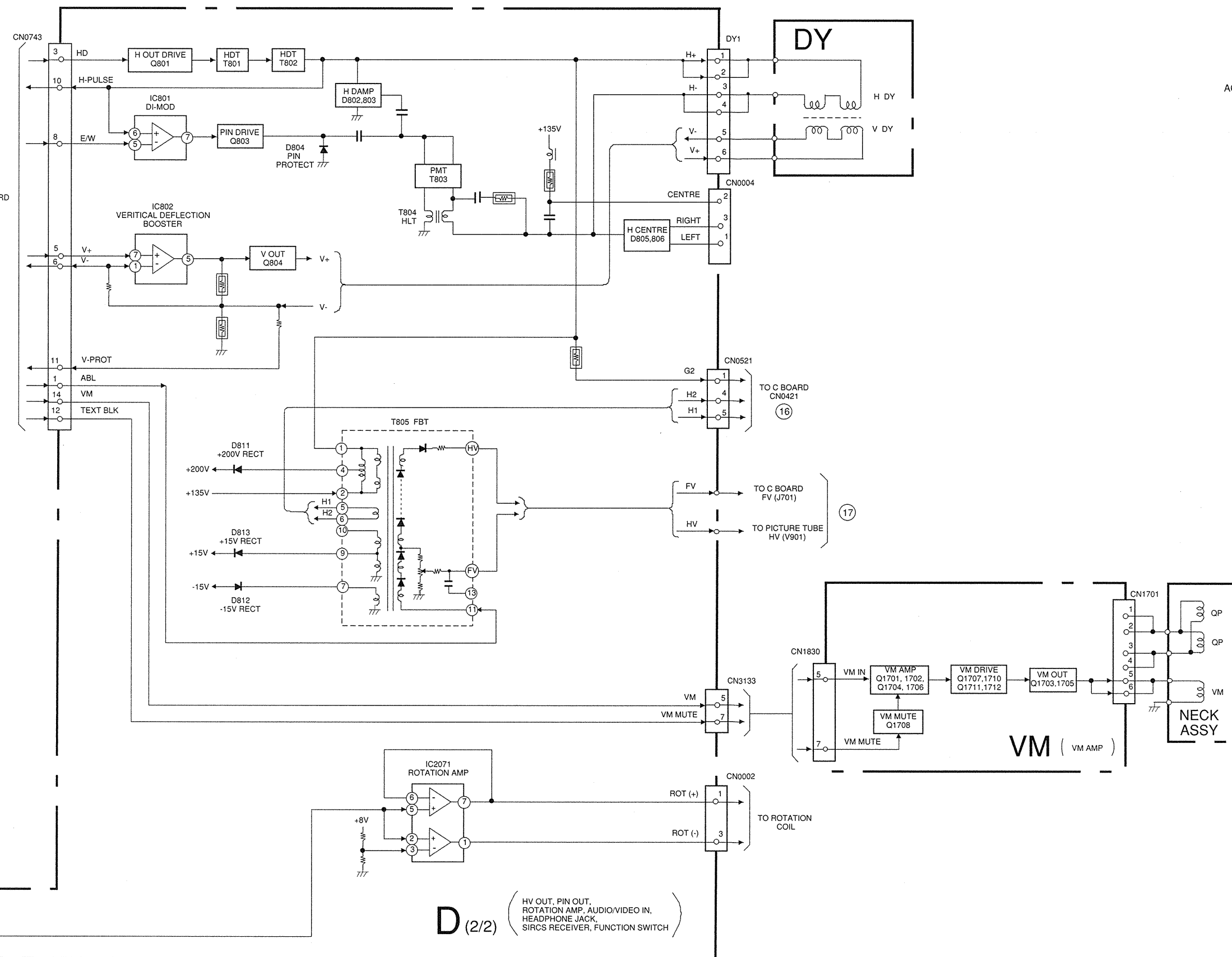
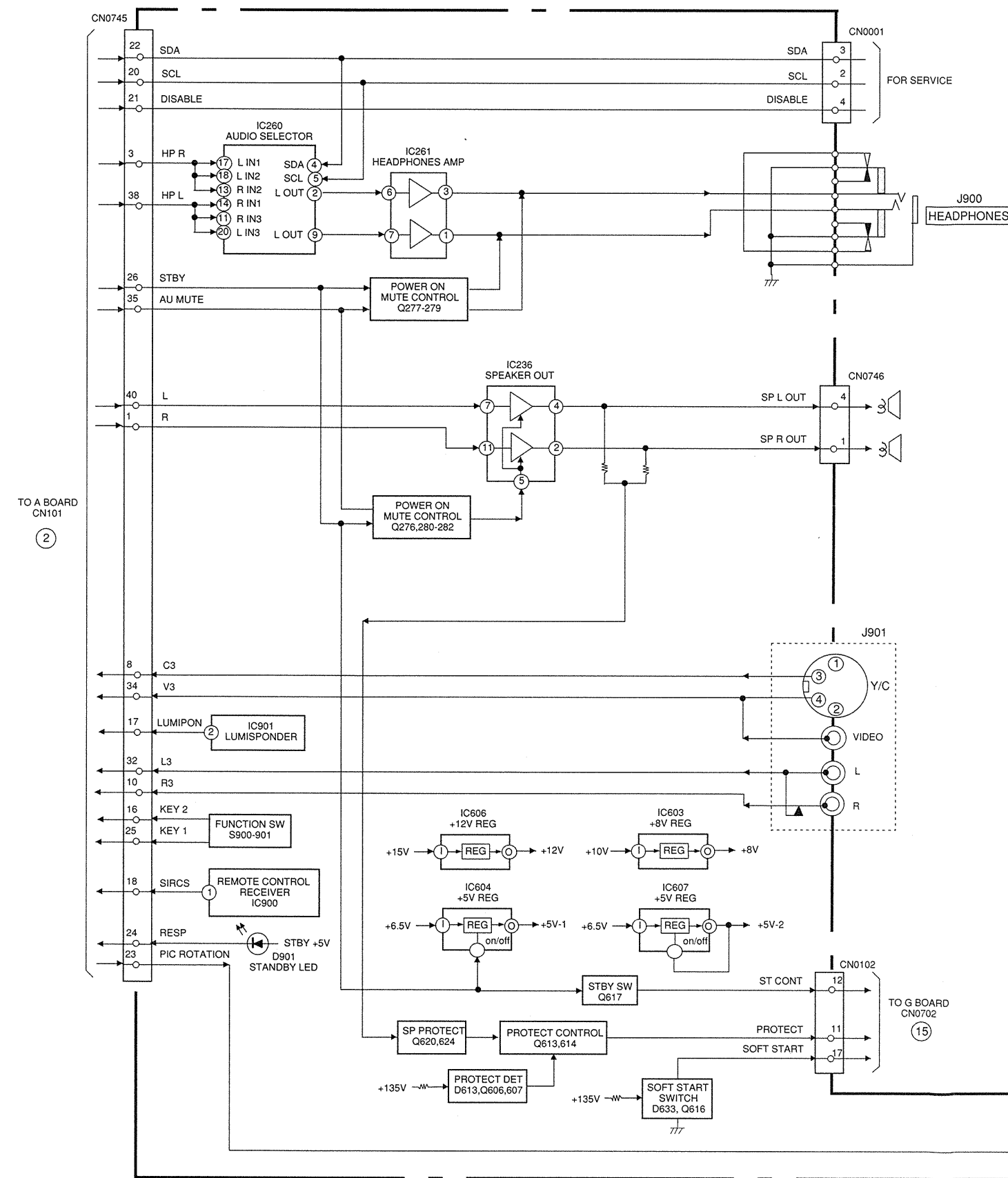


[illegible]

KV-25X3

KV-25X3

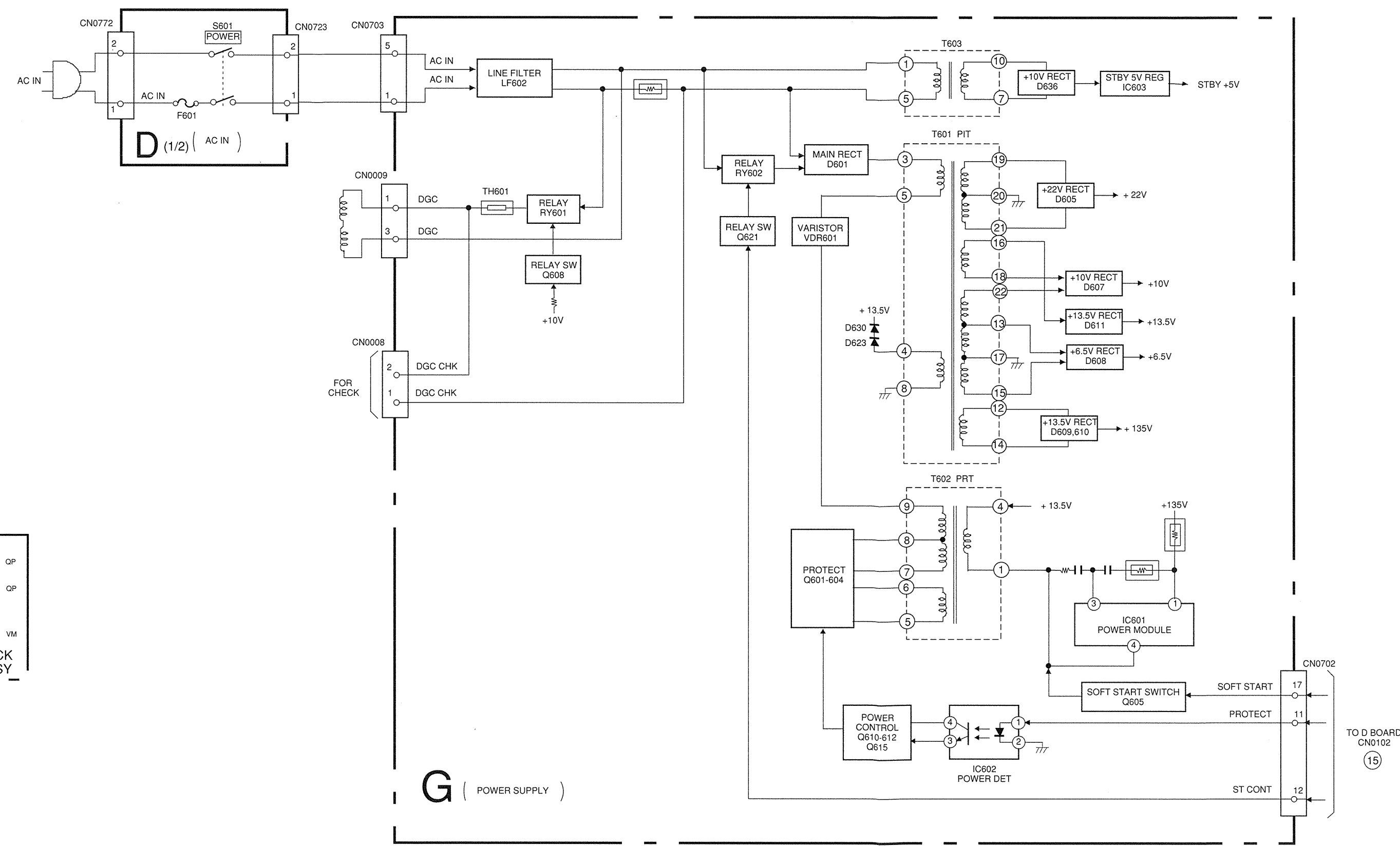
BLOCK DIAGRAM (4)



KV-25X3

KV-25X3

BLOCK DIAGRAM (5)

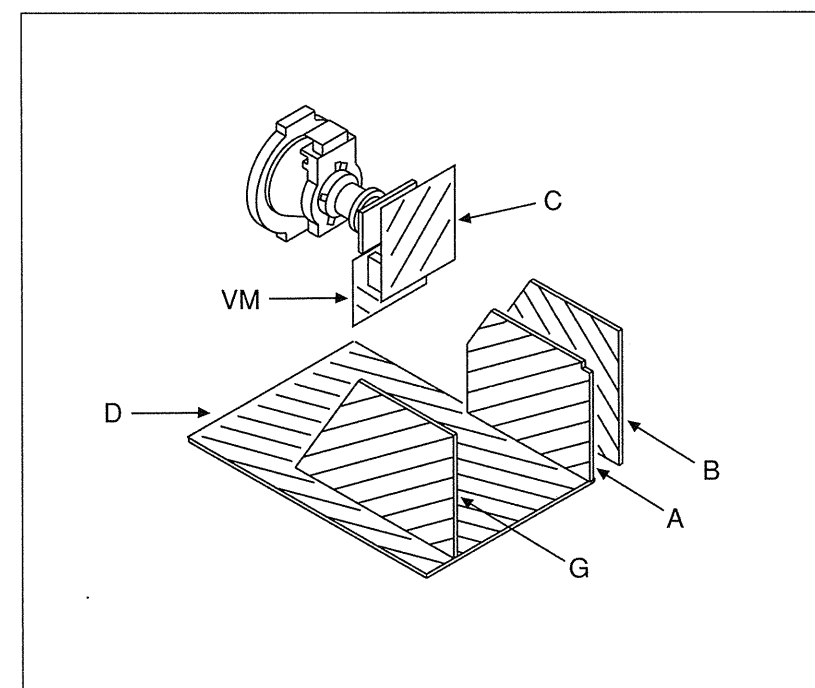




A

AV INPUT/OUTPUT INTERFACE, COLOR DECODER,  
SOUND PROCESSOR, MICRO CONTROLLER, MEGA TEXT

## 5-2. CIRCUIT BOARDS LOCATION



## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

## Note :

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $k = 1000$ ,  $M = 1000K$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm

Rating electrical power  $\frac{1}{4}$  W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$  : earth - ground.
- $\#$  : earth - chassis.
- $\#$  : no mounted.

## Reference information

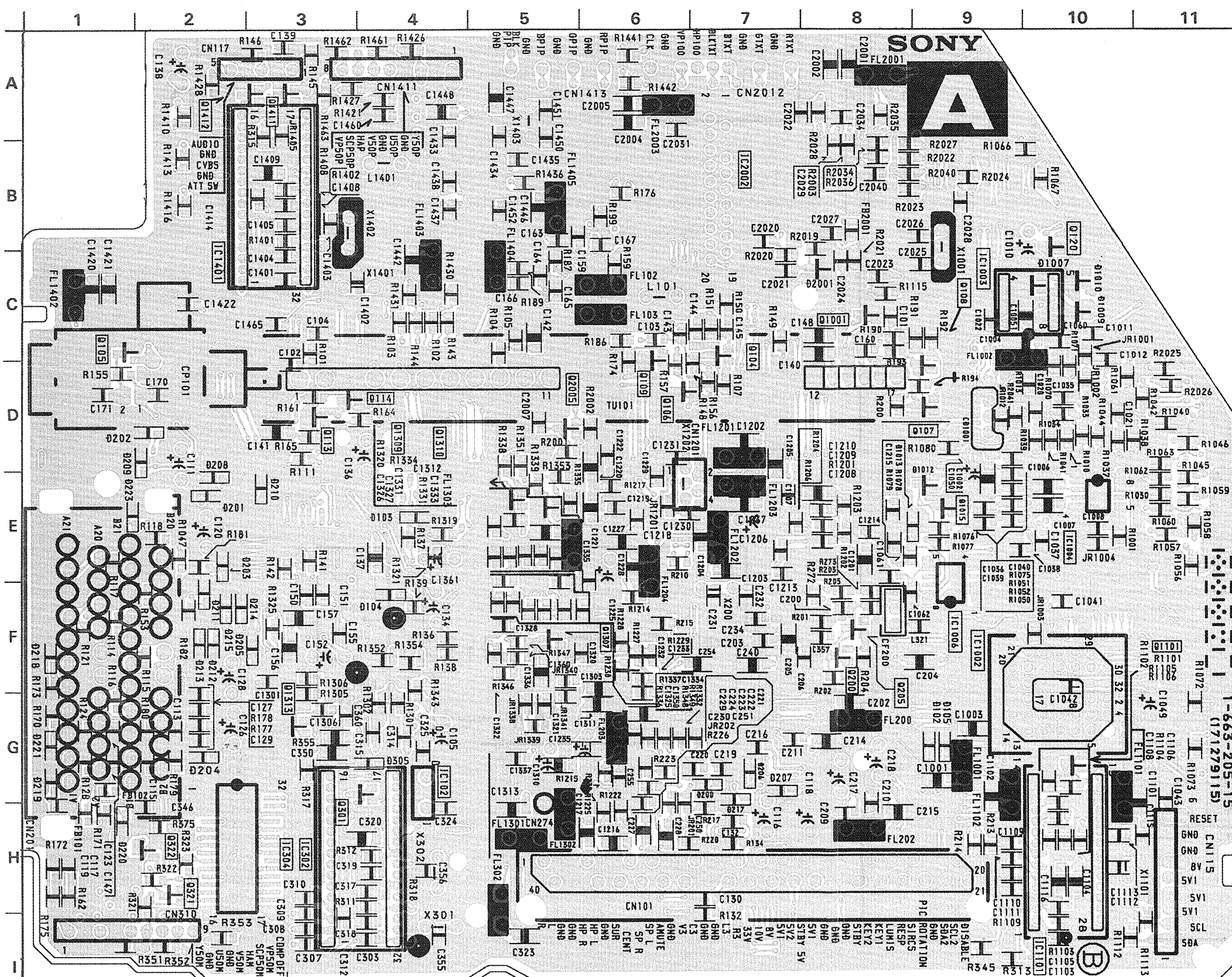
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FRPD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: X	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- $\perp$  : B+ bus.
- : signal path. (RF)

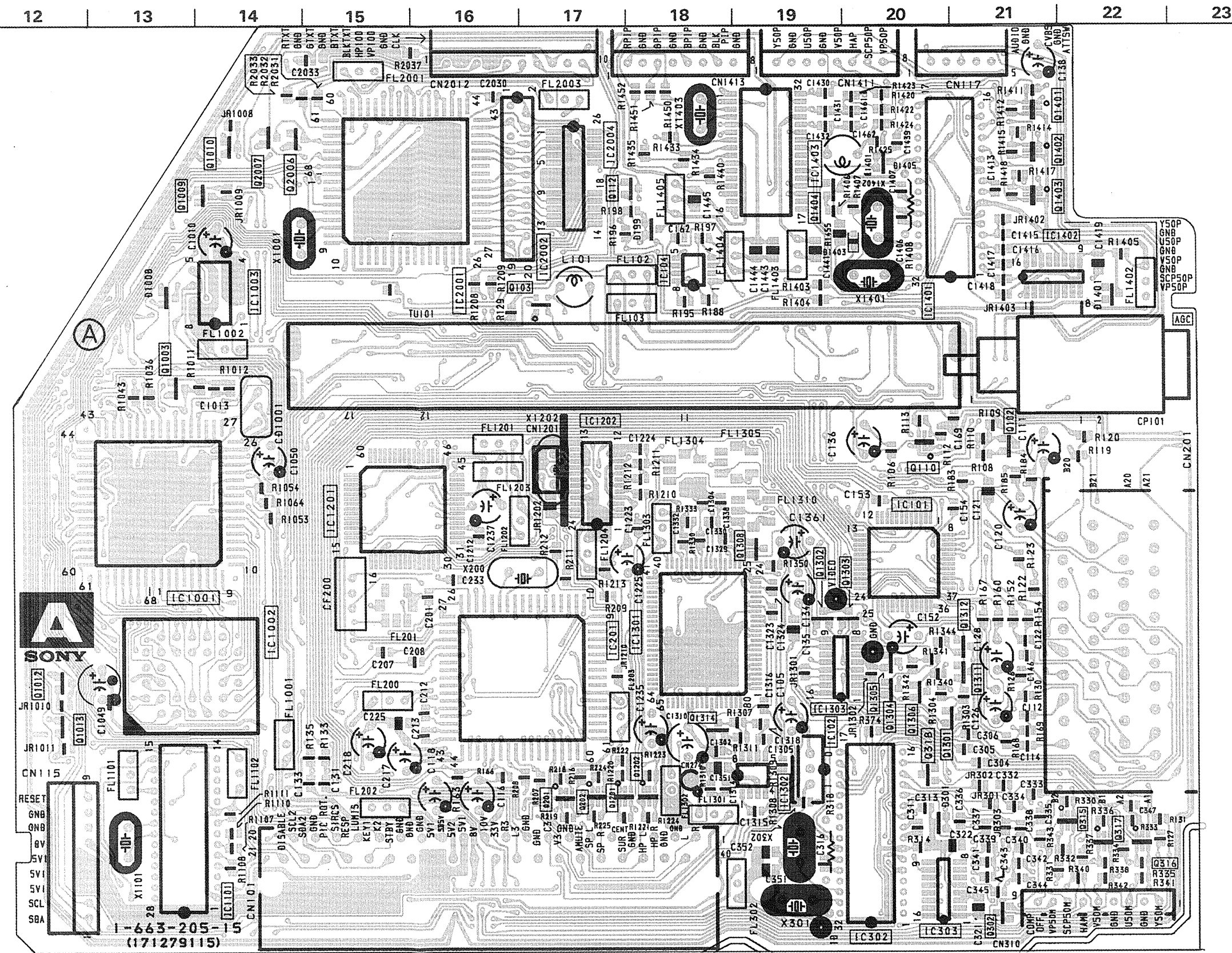
## A BOARD

IC		Q1404	B-21
IC101	E-21	Q1411	A-3
IC102	H-4	Q1412	A-2
IC104	C-19	Q2005	D-6
IC201	G-18	Q2006	B-15
IC302	H-3	Q2007	B-15
IC303	I-21	DIODE	
IC1001	F-14	D102	G-9
IC1002	G-10	D103	E-4
IC1003	C-10	D104	F-4
IC1004	E-11	D105	G-9
IC1401	C-2	D199	C-18
IC1403	B-21	D200	H-7
IC2001	C-17	D201	E-2
TRANSISTOR		D202	D-2
Q102	E-22	D203	F-3
Q103	C-17	D204	G-2
Q104	D-7	D205	F-3
Q106	D-6	D206	G-7
Q107	D-9	D207	G-7
Q108	C-9	D208	E-2
Q109	D-6	D209	E-2
Q110	E-21	D210	E-3
Q112	B-18	D211	F-2
Q113	D3	D212	F-2
Q120	C-10	D213	F-2
Q200	G-8	D214	F-3
Q205	F-9	D215	F-2
Q301	H-4	D217	H-7
Q302	I-22	D218	F-1
Q315	H-22	D219	H-1
Q316	I-23	D220	H-1
Q317	I-23	D221	G-1
Q1001	C-8	D301	H-21
Q1015	E-9	D305	G-4
Q1301	H-21	D1007	C-10
Q1305	G-21	D1008	C-14
Q1311	G-22	D1009	C-10
Q1312	F-21	D1010	C-10
Q1401	A-22	D1012	E-9
Q1402	B-22	D1403	C20
Q1403	B-22	D1405	B-21

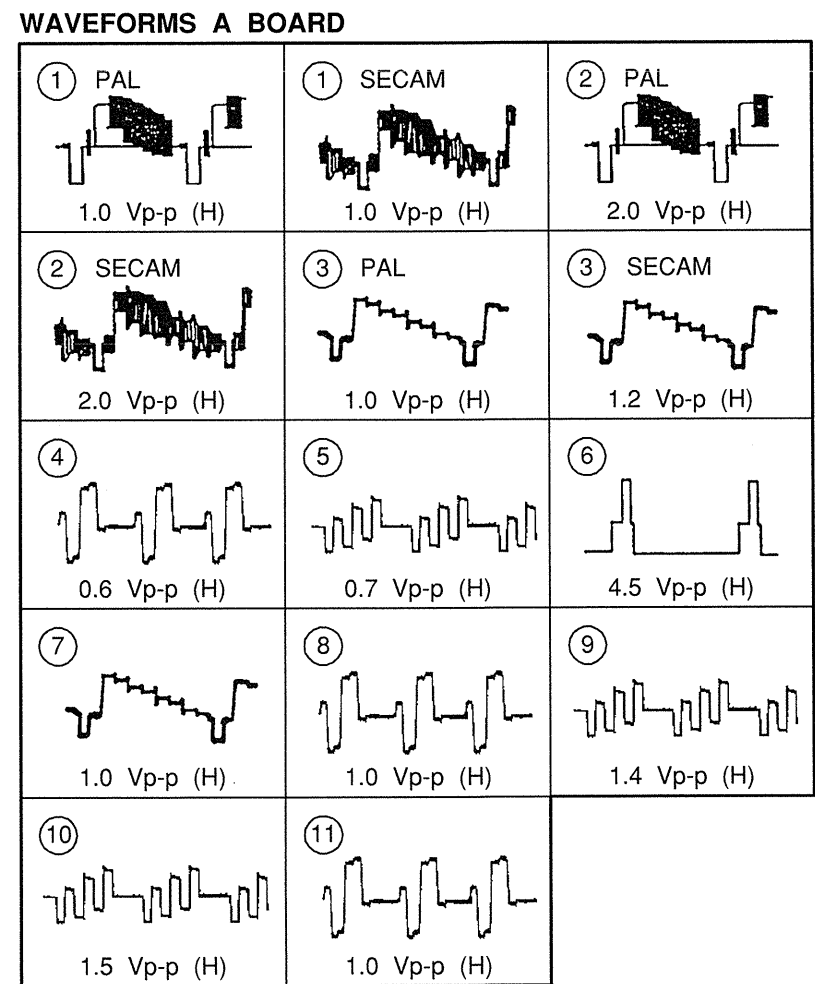
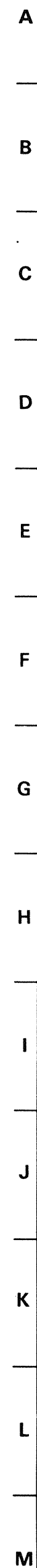
## A Board &lt; Conductor Side &gt;



## A Board &lt; Component Side &gt;







### A (1/2) BOARD IC VOLTAGE TABLE

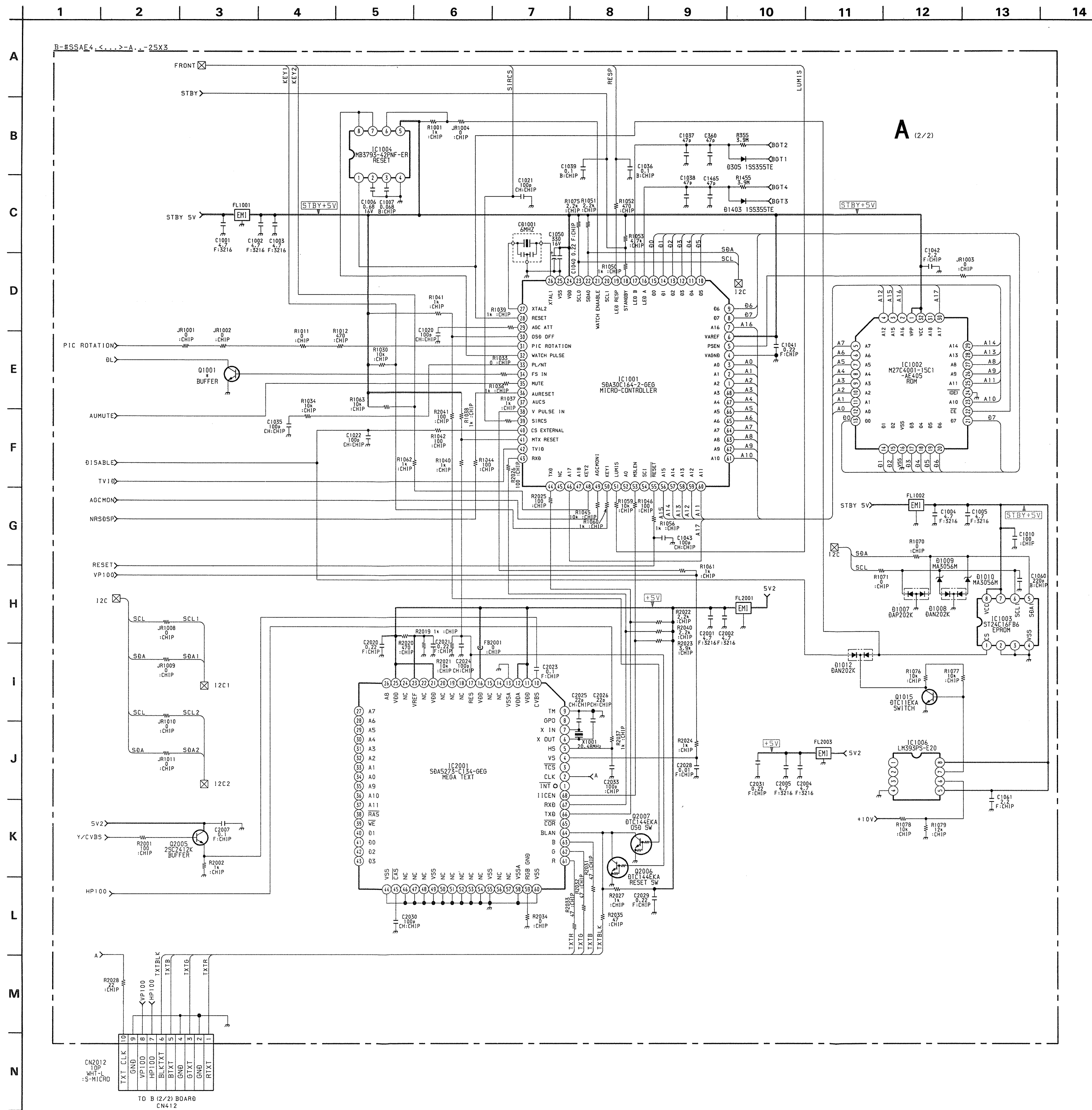
IC Voltage Table					
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC201	4	0.5	IC1201	4	4.7
	5-6	4.7		13	4.7
	7	2.4		31	4.7
	8-9	4.7		35	4.7
	20	2.4		37	2.7
	24	4.4		39	2.2
	25	8.8		40	2.7
	26	4.4		41	4.7
	28	3.8		45	4.8
	29	2.7		49	2.7
	30-31	3.8		50-51	3.8
	39-42	3.8		59-62	3.8
	44	6.2		44	6.2
	45	8.0		45	8.0
	46	7.0		IC1303	1
47-48	3.8	5	0.6		
50-51	3.7	11-12	3.0		
53-54	3.8	14	1.4		
56-57	1.2	16	1.2		
61	4.8	1-2	2.0		
IC302	1-2	2.0	IC1401	3-4	2.4
	3-4	2.4		5	3.5
	5	3.0		6	4.0
	6	4.0		7	7.8
	7	8.0		8	5.0
	8	5.0		10	0.8
	10	0.5		12	2.4
	12	3.2		19-24	2.6
	13-14	2.6		15	8.0
	15	8.0		17	0.3
	17	0.3		22	7.8
	19	1.6		24	3.6
	21	1.0		26	3.3
	23-24	4.0		28	3.5
		26		3.7	29
28		3.5	30	2.6	
29		5.0	31	2.6	
30		2.5	32	3.8	
32		2.0			

### A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Q#	B Base	C Collector	E Emitter
Q102	1.9	4.7	1.3
Q105	0.08	4.5	0.08
Q107	4.4	1.7	5.0
Q108	1.8	4.4	1.2
Q112	4.3	4.9	5.0
Q120	4.6	0.1	0.1
Q301	5.5	8.0	0.4
Q302	-	8.0	0.3
Q318	0.1	5.2	0.1
Q1201	8.6	5.0	9.2
Q1202	0.7	5.0	9.2
Q1301	1.9	-	0.2
Q1302	-	-	0.6
Q1303	0.8	-	1.5
Q1304	0.2	-	0.1
Q1305	2.0	-	0.1
Q1306	1.7	-	-
Q1307	-	2.4	0.1
Q1308	3.5	4.7	2.9
Q1309	0.9	0.1	1.6
Q1310	1.0	0.1	1.6
Q1311	4.5	9.0	3.9
Q1312	4.5	9.0	-
Q1313	4.6	0.7	0.1
Q1314	4.8	4.7	4.3
Q1404	4.5	7.8	3.8
Q1411	0.5	8.0	0.6
Q1412	0.1	8.0	0.1
Q1201	2.6	8.6	2.1
Q1202	2.6	8.6	2.1

**A BOARD \*MARK**

	25X3A	25X3B	25X3D	25X3E
IC201	MSP3400C-PP-C6-T-ND	MSP3410B-PS-F7-T-ND	MSP3400C-PP-C6-T-ND	MSP3410B-PS-F7-T-ND
Q1001	—	2SC2412K-T-14g-R	—	—
R107	CONDUCTOR CHIP	—	CONDUCTOR CHIP	CONDUCTOR CHIP
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)



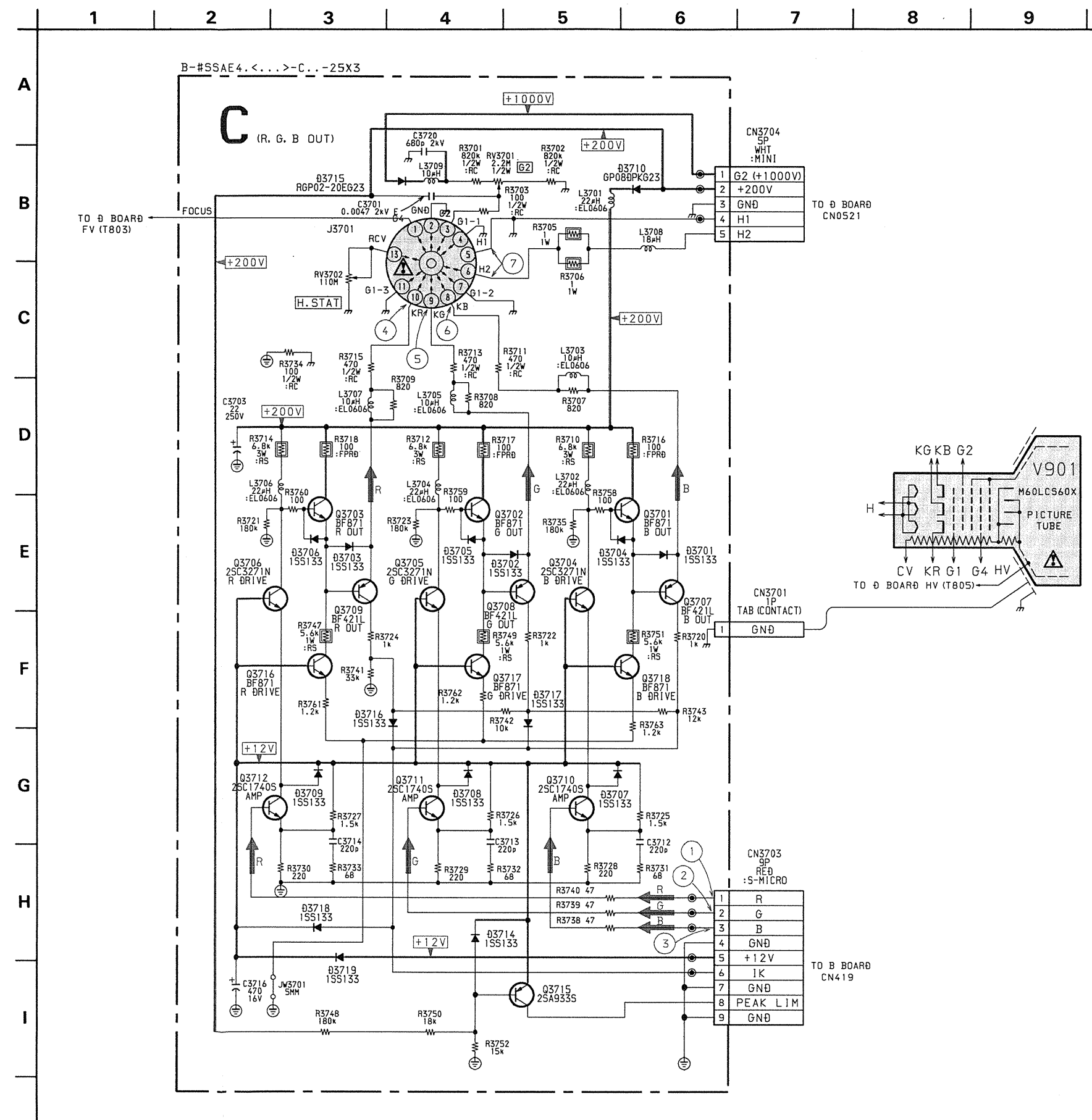
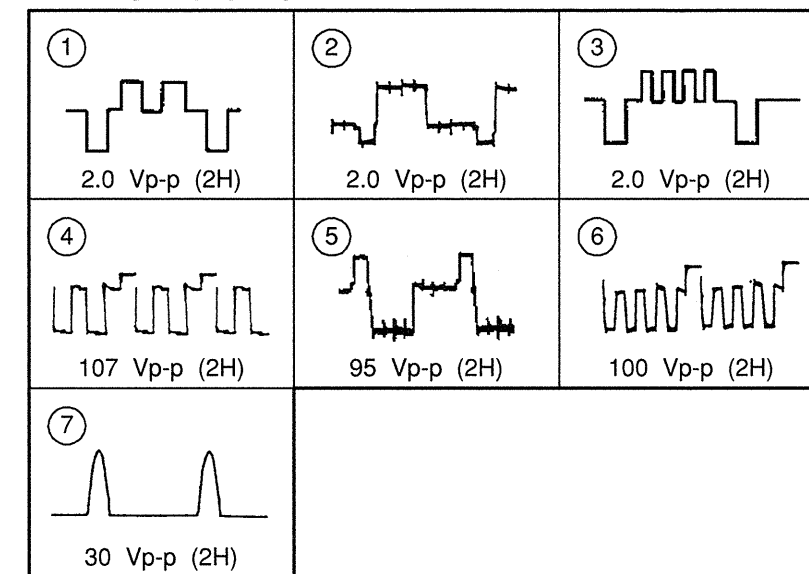
A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table					
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC101	1-5	4.6	1101	1	4.8
	7-8	4.6		2	1.1
	10	4.6		4	0.9
	17	4.6		5	0.3
	23	4.6		6-7	2.4
	29	4.6		8	1.4
	31	4.6		9	4.7
	34	4.6		10	1.7
	36	4.6		11	1.5
	38	9.0		16	4.0
	40-47	4.6		19-20	4.7
IC1001	5	2.4	2001	21	2.5
	6	4.8		22	2.3
	19	3.6		2	0.4
	20	0.1		5	0.3
	24	4.8		6-7	1.6
	26	2.1		8	4.0
	27	2.3		10	1.0
	28	4.6		11-12	4.7
	30	0.1		16	4.7
	31-32	2.4		21	4.7
	33	4.8		23	2.9
	36	4.1		25	4.7
	38	0.1		66	4.7
	39	0.6		68	4.7
	40	4.8			
	41	0.1			
	42	4.8			
	43	4.4			
	44	4.1			
48	4.8				
49	2.2				
50	4.8				
52	4.8				
54	4.8				

A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B	C	E
Q1001	0.1	0.7	0.1
Q1004	0.1	0.7	-
Q1101	3.3	5.0	2.6

WAVEFORMS C BOARD

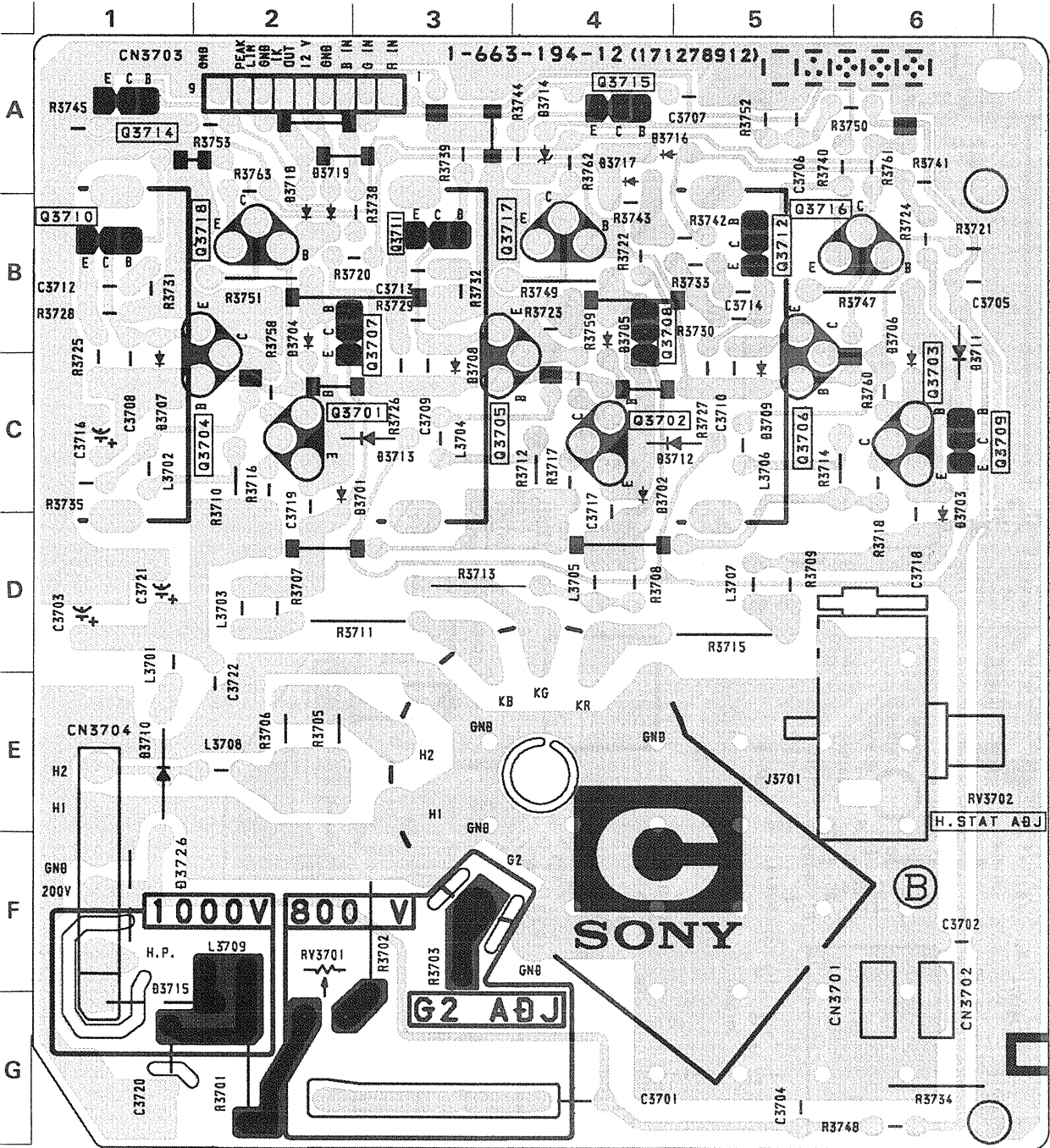




C

[ R,G,B OUT ]

C Board



KV-25X3

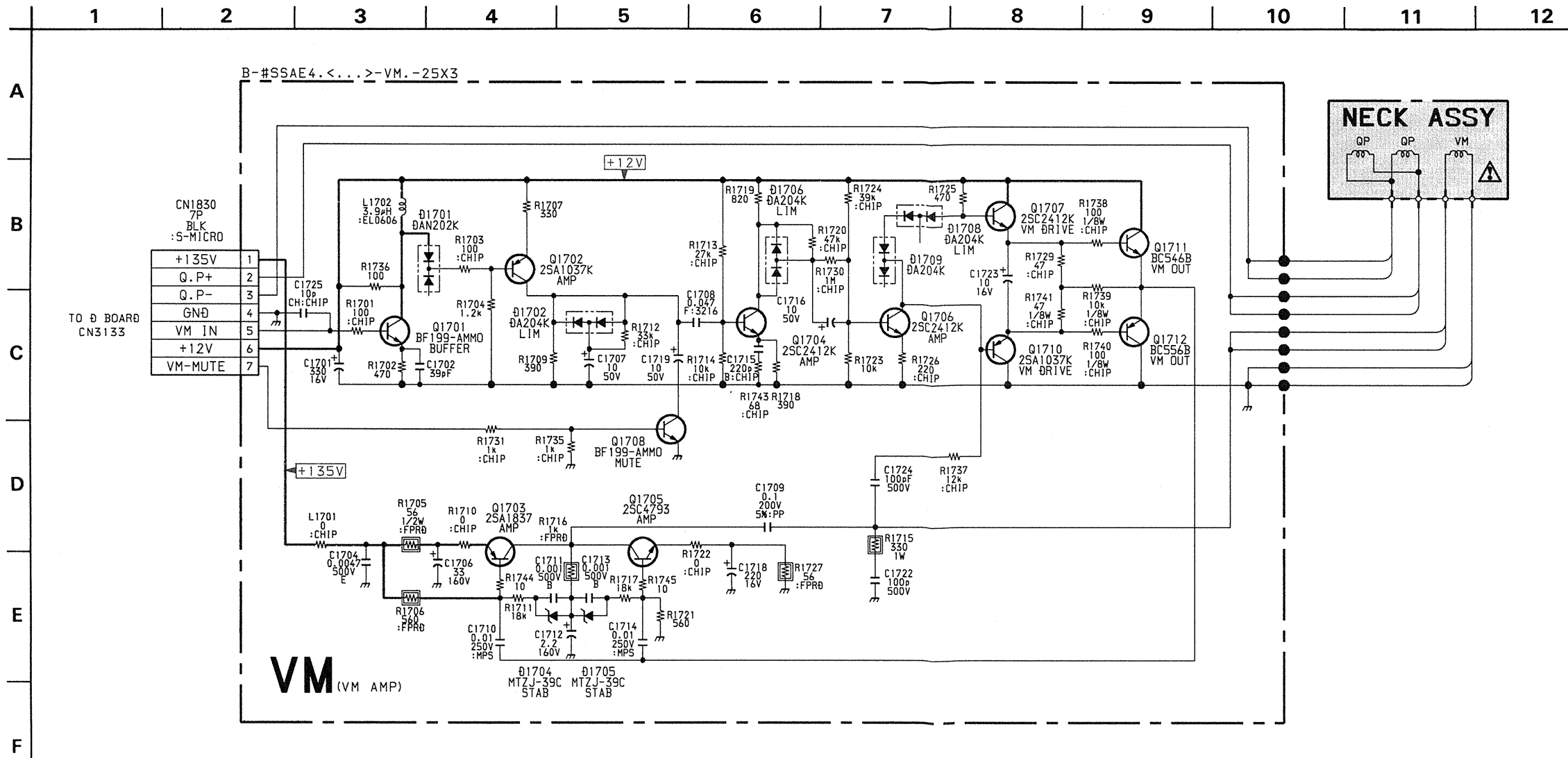
KV-25X3

C BOARD

TRANSISTOR	
Q3701	C-2
Q3702	C-4
Q3703	C-6
Q3704	C-2
Q3705	C-3
Q3706	C-5
Q3707	B-3
Q3708	B-4
Q3709	C-6
Q3710	B-1
Q3711	B-3
Q3712	B-5
Q3715	A-4
Q3716	B-6
Q3717	B-4
Q3718	B-2
DIODE	
D3701	C-2
D3702	C-4
D3703	D-6
D3704	B-2
D3705	B-4
D3706	B-6
D3707	C-1
D3708	C-3
D3709	C-5
D3710	E-1
D3714	A-4
D3715	G-1
D3716	A-5
D3717	A-4
D3718	A-2
D3719	A-2
VARIABLE RESISTOR	
RV3701	F-2
RV3702	E-6

VM BOARD TRANSISTOR VOLTAGE TABLE

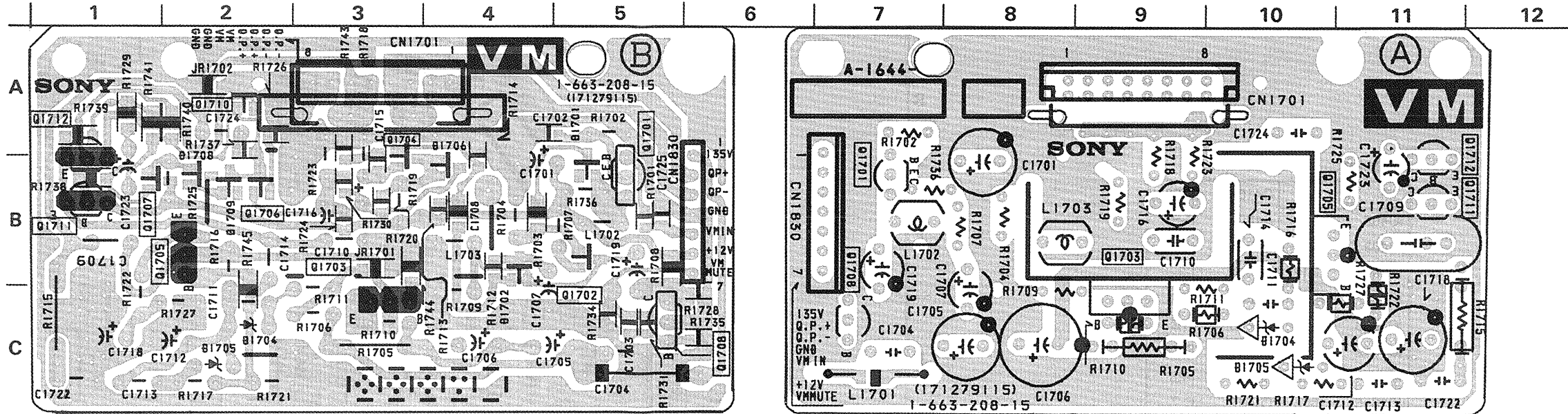
Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q1701	0.8	0.7	2.1	
Q1702	1.8	0.2	1.9	
Q1703	24.0	13.3	24.0	
Q1704	0.5	1.2	0.4	
Q1705	0.1	12.3	-	
Q1706	0.4	1.1	0.3	
Q1707	1.5	2.1	1.4	
Q1708	-	-	-	
Q1710	1.1	-	1.2	
Q1711	1.4	2.1	1.3	
Q1712	1.3	1.2	-	



VM

[ VM OUT ]

VM Board



VM BOARD

TRANSISTOR	
Q1701	A-5
Q1702	C-5
Q1703	B-3
Q1704	A-3
Q1705	B-2
Q1706	B-2
Q1707	B-1
Q1708	C-6
Q1710	A-2
Q1711	B-1
Q1712	A-1
DIODE	
D1701	A-5
D1702	C-4
D1704	C-2
D1705	C-2
D1706	A-4
D1708	B-2
D1709	B-2



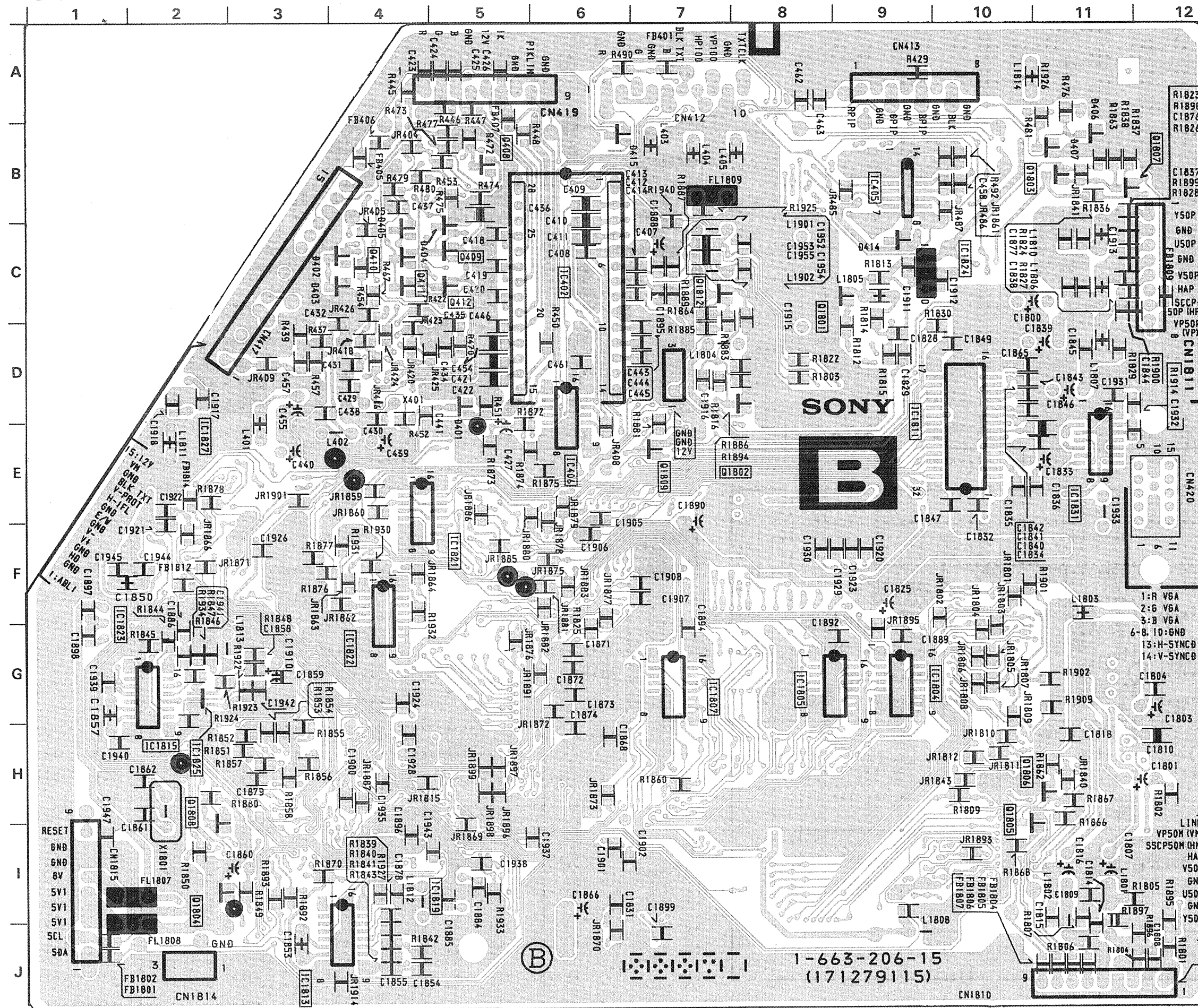
**B**

A/D, D/A CONVERTER, DIGITAL NOISE REDUCER,  
CRT DRIVER, DEFLECTION PROCESSOR

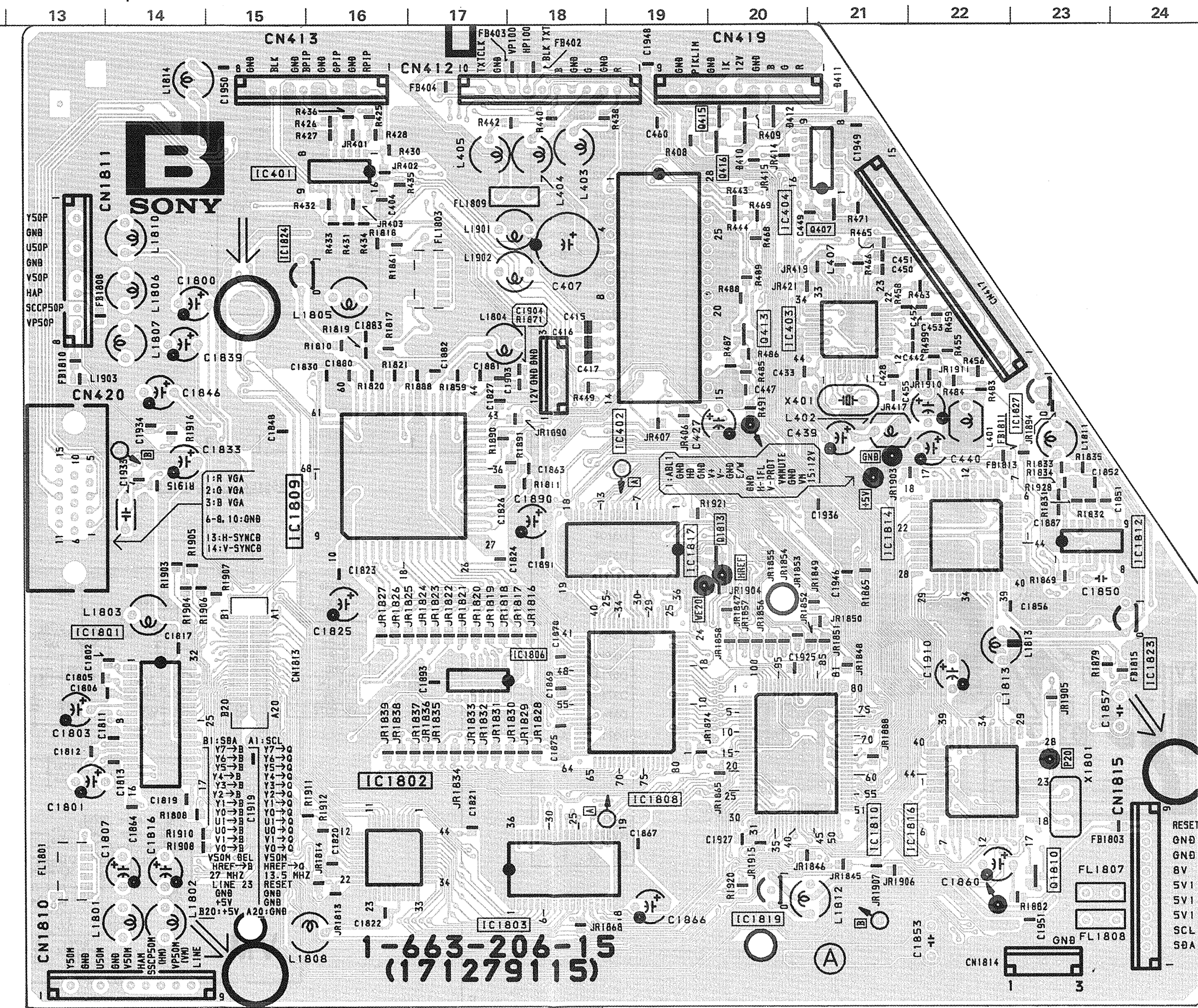
**B BOARD**

IC		Q416	B-20
IC402	C-6	Q1801	D-8
IC403	D-20	Q1802	E-8
IC1801	G-13	Q1804	I-2
IC1802	H-16	Q1805	I-10
IC1809	D-16	Q1808	H-2
IC1812	F-24	Q1809	E-7
IC1814	F-22	Q1810	I-23
IC1815	H-2	Q1812	C-7
IC1816	I-21	DIODE	
IC1823	F-1	D401	D-5
IC1824	C-10	D402	C-3
IC1825	H-2	D403	C-3
TRANSISTOR		D410	B-20
Q411	C-4	D411	A-21
Q412	C-5	D412	A-20
Q413	C-20	D415	B-7
Q415	B-19		

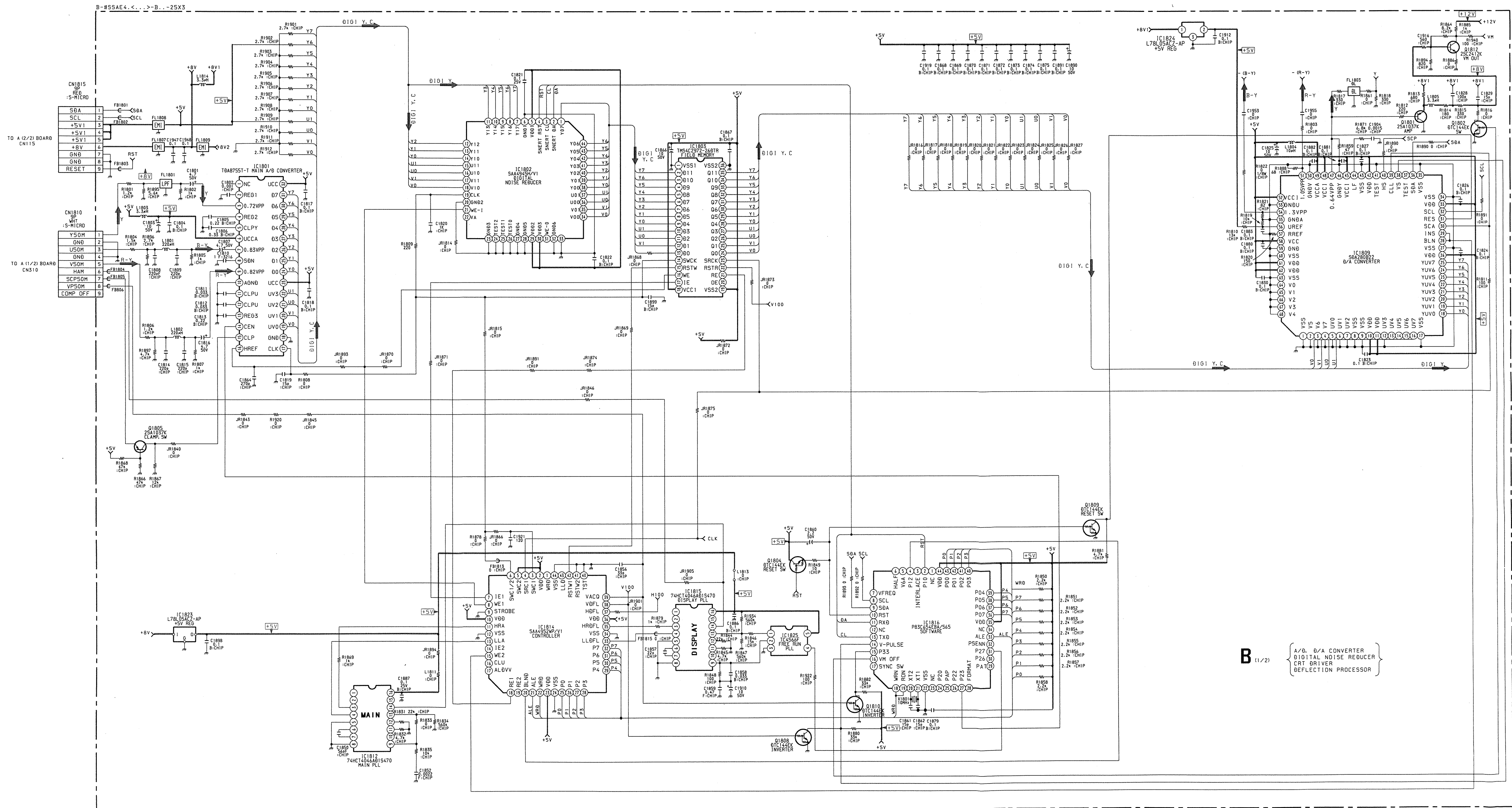
B Board < Conductor Side >



B Board < Component Side >







B (1/2) BOARD IC VOLTAGE TABLE

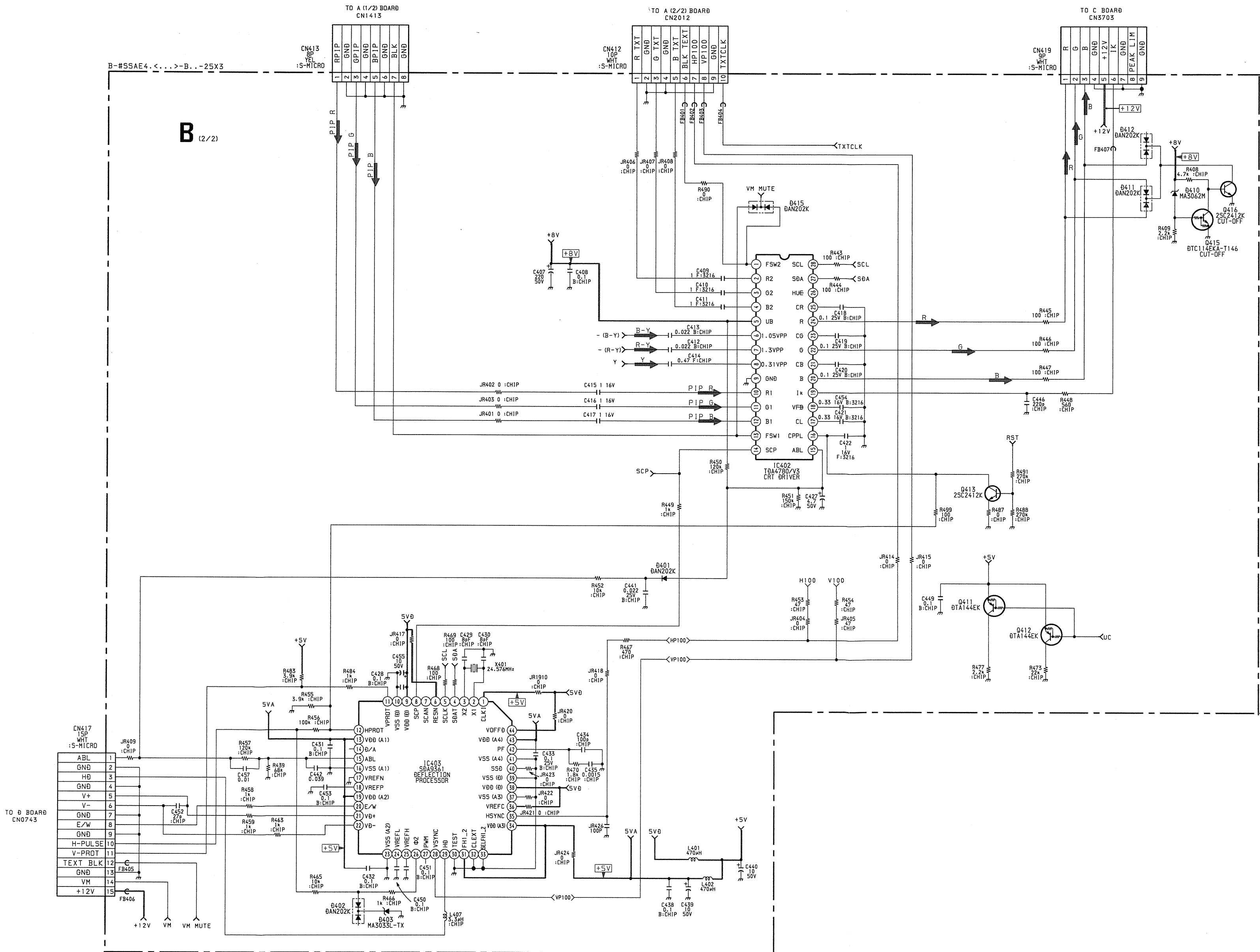
Ref No	Pin No	Voltage (V)
IC1812	3-4	2.4
	6-7	0.7
	9	4.6
	11-13	4.7
	14	0.3
IC1813	16	5.0
	3-4	2.4
	6-7	0.7
	9	4.6
	11-13	4.7
IC1815	14	0.3
	16	5.0
	1	5.0
	2	2.3
	3-4	2.5
IC1821	6-7	0.8
	9-11	3.0
	12	4.5
	13	3.0
	14	0.4
IC1822	15	0.2
	16	5.2
	2	2.5
	4-5	2.3
	12	2.0
IC1823	14	2.0
	15	2.6
	16	6.0
	2	2.9
	4-5	2.6
IC1824	12	2.3
	14	2.1
	15	2.8
	16	6.0
	2	2.9

B BOARD TRANSISTOR VOLTAGE TABLE

Ref No	B Base	C Collector	E Emitter
Q411	0.1	4.8	4.8
Q412	0.1	4.8	4.8
Q415	1.8	0.1	-
Q416	0.1	5.6	-
Q1801	0.1	-	0.9
Q1802	4.0	0.1	0.1
Q1804	0.3	4.8	0.1
Q1805	2.5	1.3	0.7
Q1807	0.1	4.7	0.1
Q1809	0.1	0.1	0.1
Q1810	0.1	4.8	-
Q1812	0.5	10.5	-
Q1813	0.1	3.7	0.1

B (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC402	2-4	5.0
	5	7.8
	6-7	4.0
	8	3.7
	10-12	5.0
	14	0.7
	16	4.7
	17	5.1
	18	1.8
	19	7.5
	20	2.5
	21	3.3
	22	2.8
	23	3.3
	24	2.9
	25	3.3
IC405	5	3.2
	9	3.2
IC406	13-14	3.2
	16	4.8





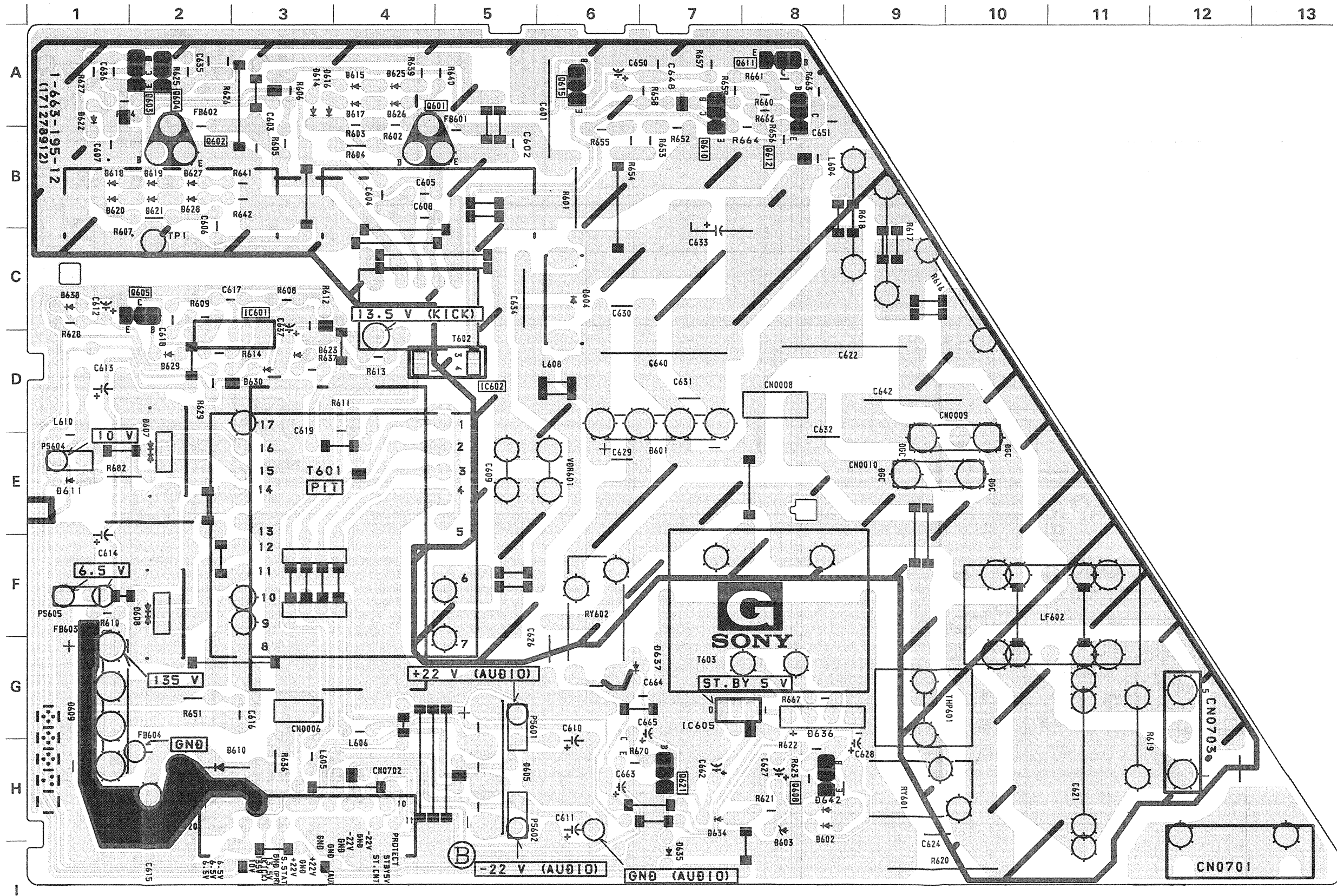
**NOTE:**

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

G

[ POWER SUPPLY ]

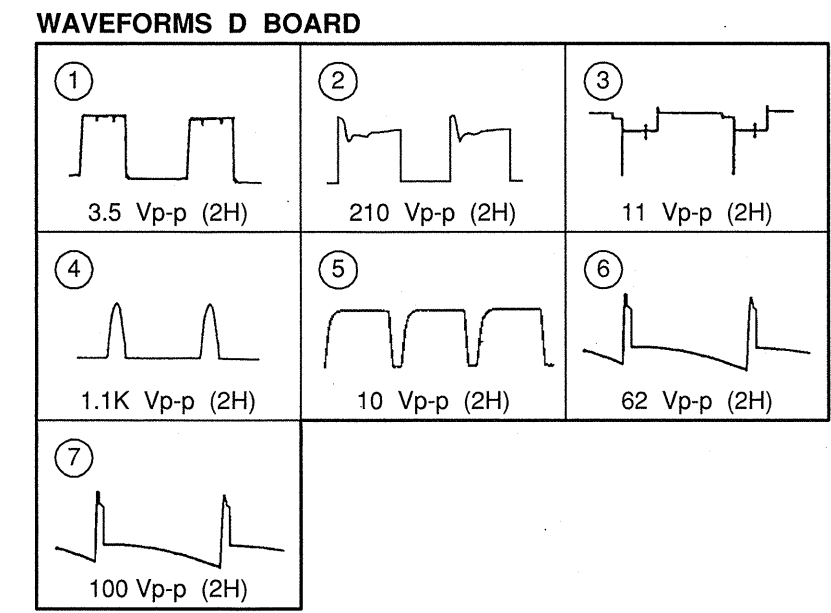
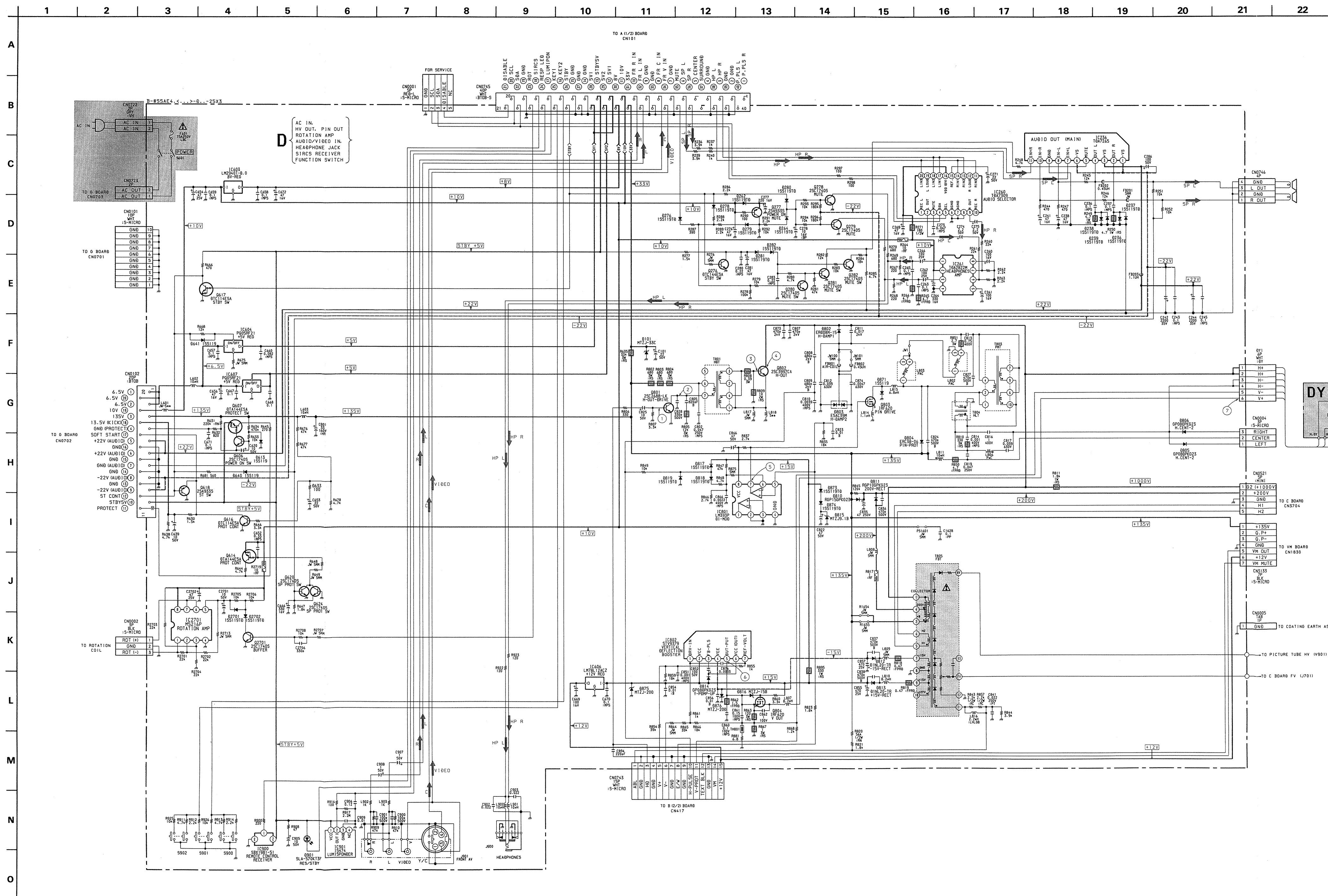
G Board



G BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q601	-1.6		-	
Q602	0.2	293.0	-	
Q603	0.6	0.1	-	
Q604	0.1	1.4	-	
Q605	0.1	11.0	-0.1	
Q608	-	4.8	-0.1	
Q610	22.0	-2.3	26.8	
Q611	-1.6	26.6	-	
Q612	26.7	-1.1	26.8	
Q615	-2.6	-1.5	-	
Q621	0.6	-	-0.1	





**D BOARD TRANSISTOR VOLTAGE TABLE**

Ref No	B	C	E
Q276	0.7	4.0	-
Q277	10.0	-	9.7
Q278	-1.3	-	-
Q279	-1.3	-	-1.3
Q280	0.4	0.7	-
Q281	0.7	-	-
Q282	0.7	-	-
Q801	-1.0	101.0	-
Q802	-	136.0	-
Q803	9.0	15.0	-
Q804	11.3	0.1	-1.3
Q806	0.5	4.8	0.3
Q807	4.8	1.6	4.8
Q813	13.5	-	-
Q814	10.0	9.0	10.0
Q816	0.7	-	-
Q817	0.7	3.5	-
Q818	3.5	-	-
Q820	-	10.0	-
Q824	-	10.0	-
Q2701	-	2.3	-
Q1610	-0.5	2.2	-
Q1611	0.2	43.4	-



AC IN, HV OUT, PIN OUT, ROTATION AMP, AUDIO/VIDEO IN,  
HEADPHONE JACK, SIRCS RECEIVER, FUNCTION SWITCH

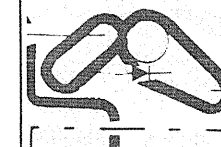
KV-25X3

**KV-25X3**

This is a detailed schematic diagram of a Sony portable cassette player circuit board. The board is populated with numerous integrated circuits (ICs), capacitors, resistors, and other electronic components. Key features include a Sony logo, a 'HEADPHONE AMP.' section, and various output jacks. The diagram is labeled with component values and part numbers, and includes a grid system for reference.

The schematic shows the following components and sections:

- Power Section:** Includes a transformer (T801, T802, T803, T804, T805) and a power supply section with a 1.5V battery (F601) and a 22V (AUB10) regulator.
- Audio Section:** Includes a cassette deck (CN0101, CN0102, CN0103) and a cassette deck (CN0104).
- Control Section:** Includes a cassette deck (CN0105) and a cassette deck (CN0106).
- Output Section:** Includes a cassette deck (CN0107) and a cassette deck (CN0108).
- Headphone Amp. Section:** Includes a cassette deck (CN0109) and a cassette deck (CN0110).
- Other Components:** Includes a cassette deck (CN0111), a cassette deck (CN0112), a cassette deck (CN0113), a cassette deck (CN0114), a cassette deck (CN0115), a cassette deck (CN0116), a cassette deck (CN0117), a cassette deck (CN0118), a cassette deck (CN0119), a cassette deck (CN0120), a cassette deck (CN0121), a cassette deck (CN0122), a cassette deck (CN0123), a cassette deck (CN0124), a cassette deck (CN0125), a cassette deck (CN0126), a cassette deck (CN0127), a cassette deck (CN0128), a cassette deck (CN0129), a cassette deck (CN0130), a cassette deck (CN0131), a cassette deck (CN0132), a cassette deck (CN0133), a cassette deck (CN0134), a cassette deck (CN0135), a cassette deck (CN0136), a cassette deck (CN0137), a cassette deck (CN0138), a cassette deck (CN0139), a cassette deck (CN0140), a cassette deck (CN0141), a cassette deck (CN0142), a cassette deck (CN0143), a cassette deck (CN0144), a cassette deck (CN0145), a cassette deck (CN0146), a cassette deck (CN0147), a cassette deck (CN0148), a cassette deck (CN0149), a cassette deck (CN0150), a cassette deck (CN0151), a cassette deck (CN0152), a cassette deck (CN0153), a cassette deck (CN0154), a cassette deck (CN0155), a cassette deck (CN0156), a cassette deck (CN0157), a cassette deck (CN0158), a cassette deck (CN0159), a cassette deck (CN0160), a cassette deck (CN0161), a cassette deck (CN0162), a cassette deck (CN0163), a cassette deck (CN0164), a cassette deck (CN0165), a cassette deck (CN0166), a cassette deck (CN0167), a cassette deck (CN0168), a cassette deck (CN0169), a cassette deck (CN0170), a cassette deck (CN0171), a cassette deck (CN0172), a cassette deck (CN0173), a cassette deck (CN0174), a cassette deck (CN0175), a cassette deck (CN0176), a cassette deck (CN0177), a cassette deck (CN0178), a cassette deck (CN0179), a cassette deck (CN0180), a cassette deck (CN0181), a cassette deck (CN0182), a cassette deck (CN0183), a cassette deck (CN0184), a cassette deck (CN0185), a cassette deck (CN0186), a cassette deck (CN0187), a cassette deck (CN0188), a cassette deck (CN0189), a cassette deck (CN0190), a cassette deck (CN0191), a cassette deck (CN0192), a cassette deck (CN0193), a cassette deck (CN0194), a cassette deck (CN0195), a cassette deck (CN0196), a cassette deck (CN0197), a cassette deck (CN0198), a cassette deck (CN0199), a cassette deck (CN0200).

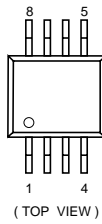


**NOTE:**  
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

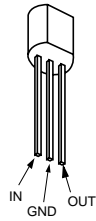
IC		D237	G-14
IC236	H-13	D238	G-14
IC260	I-5	D239	G-14
IC261	I-4	D262	H-13
IC603	H-11	D264	G-13
IC604	H-9	D276	I-12
IC606	H-7	D278	H-12
IC607	G-10	D279	H-12
IC801	C-4	D280	G-13
IC802	H-8	D281	H-12
IC900	D-1	D282	G-12
IC901	C-1	D613	B-12
IC2701	A-8	D633	B-11
TRANSISTOR		D640	B-10
Q276	H12	D641	H-10
Q277	H-13	D802	F-10
Q278	I-14	D803	E-10
Q279	I-14	D804	B-5
Q280	H-12	D805	C-15
Q281	G-12	D806	C-15
Q282	G-13	D810	G-11
Q606	B-11	D811	F-12
Q607	A-11	D812	H-9
Q614	A-10	D813	H-9
Q616	A-11	D814	H-8
Q617	G-13	D815	D-3
Q618	A-11	D816	G-8
Q620	A-15	D817	D-4
Q624	A-15	D818	E-4
Q801	D-7	D819	D-3
Q802	C-10	D871	D-5
Q803	D-5	D873	D-4
Q804	G-8	D874	D-3
Q2701	A-9	D901	C-1
DIODE		D2701	A-9
D101	E-3	D2702	A-9
D236	G-14		

## 5-4. SEMICONDUCTORS

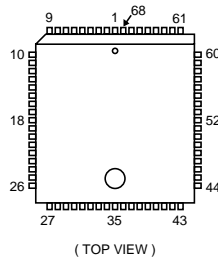
BA7046F  
BA7046F-T1  
MB3793-42PNF  
MB3793-42PNF-ER



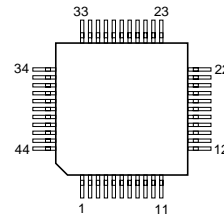
LM78L12ACZ  
L78L05ACZ-AP  
L78L12ACZ-AP



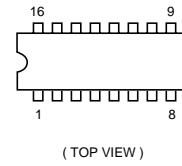
MSP3400C-PS-C6-T-ND  
MSP3410B-PS-F7-T-ND  
SDA30C164-2-GEG  
SDA5273-C126-GEG



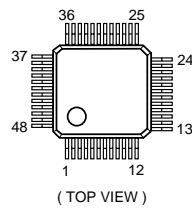
SAA4945H/V1  
SDA9361



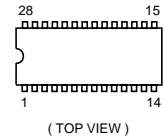
TDA4665T-T



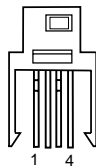
CXA1855Q-T6



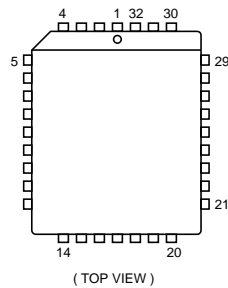
TDA4780/V3



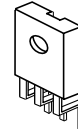
IS474



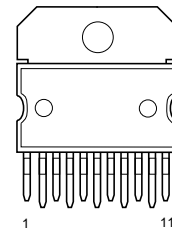
M27C4001-15C1-AE401



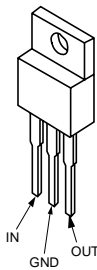
SBX1981-51



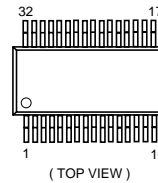
TDA7265



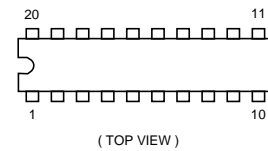
LM2940CT-9.0  
LM2940T-9.0  
L4941BV



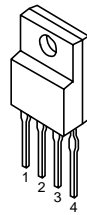
SDA9288X-A141  
TDA8755T-T



TDA7309

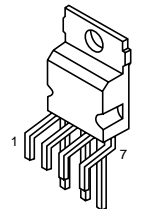


PQ05RF21

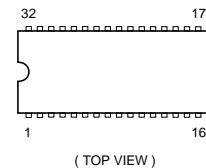


1 : V IN  
2 : V OUT  
3 : GND  
4 : ON/OFF CONTROL

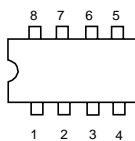
STV9379



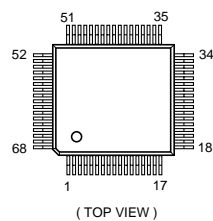
TDA9143/N2



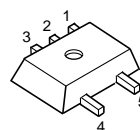
LM393P  
LM393PS-E20  
M5216P  
ST24C16FB6  
TDA2822M  
UPC393C



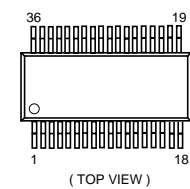
P83C654EBA/565  
SDA9280822



TC4S66F  
TC4S66F-TE85L

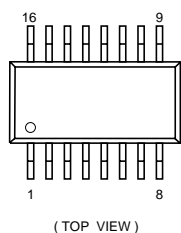


TMS4C2972-26DTR  
TMS4C2972-28DTR

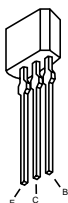




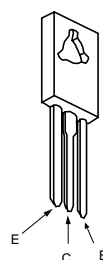
74HCT4046AD  
74HCT4046AD/S470  
74HCT4046AD/S470PASS01



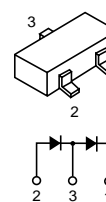
DTC114ESA-TP  
DTC144ESA-TP  
2SA933S-RT  
2SC1740S-RT



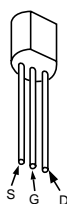
2SC2688-LK  
2SC3271-N



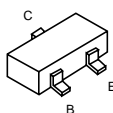
DA204K  
DA204K-T-146



BC546B  
BC556B



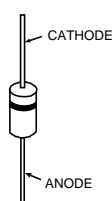
DTA144EK-T146 DTC144EK-T146  
DTC114EK DTC144EKA-T146  
DTC114EKA-T146 2SA1037K-T-146-R  
DTC124EKA-T146 2SC2412K-T-146-R  
DTC144EK



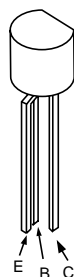
2SC4793



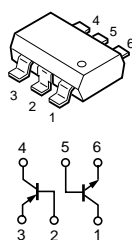
D1NL20-TR  
GP08DPKG23  
R2K-V1  
RGP02-20EG23  
RGP15GPKG23  
1SS133T-77



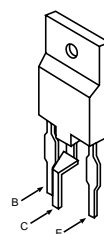
BF199  
BF199-AMMO



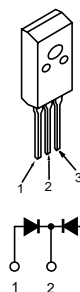
IMZ1A-T109



2SC4834NP-F09



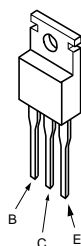
D10SC4M



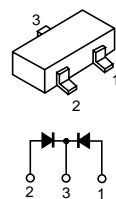
BF421L-AMMO  
2SC2500-B



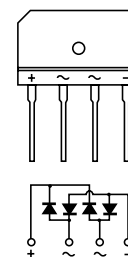
IRF620



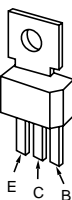
DAN202K  
DAN202K-T-146



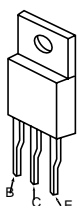
RBA-402L



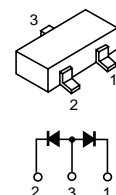
BF871-127



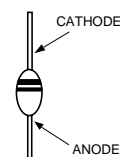
2SA1837



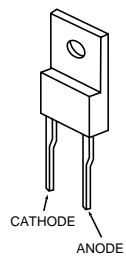
DAP202K  
DAP202K-T-146



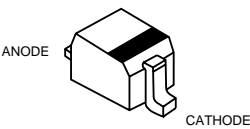
ERC38-06



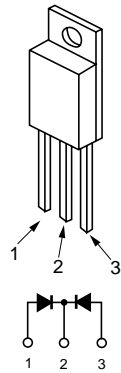
ERD08M-15



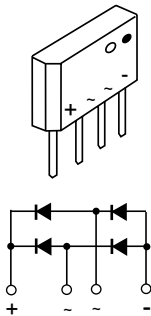
UDZ-TE-17-12B



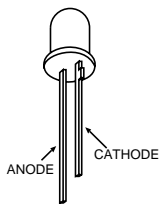
ESAD39M-06C  
ESAD39M-06CF38



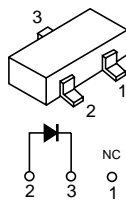
S1VB20-S



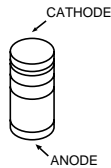
SLA-570KT3F



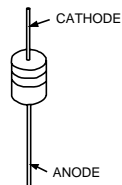
MA3033-L      MA3056M-TX  
MA3033L-TX    MA3062M-TX



MA3051L-TX

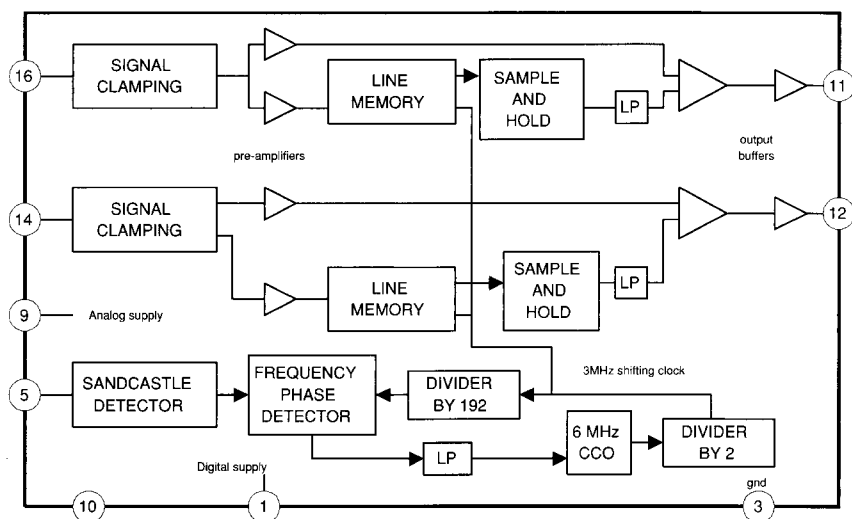


MTZJ-T-77-15B    MTZJ-T-77-20D  
MTZJ-T-77-33C    1SS119-25  
MTZJ-T-77-39C    1SS119-25TD  
MTZJ-T-77-9.1B

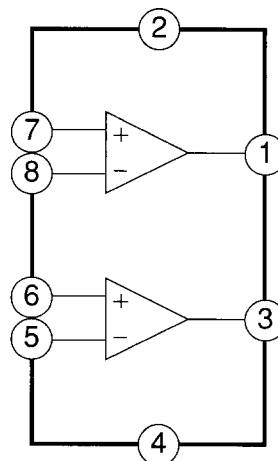


## 5-5. IC BLOCK DIAGRAMS

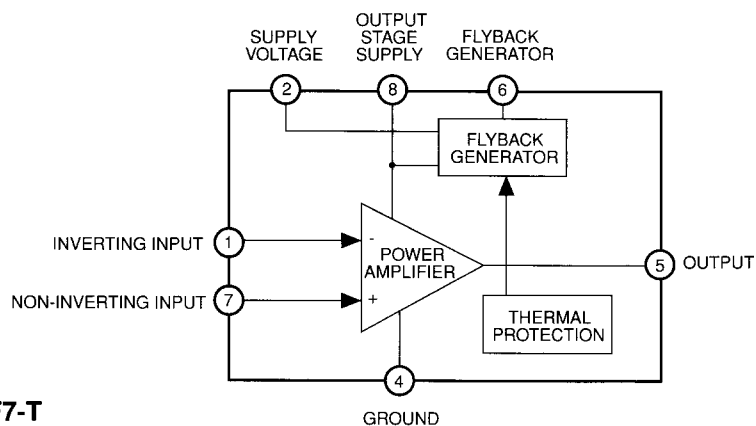
A Board IC303, TDA4665T-T



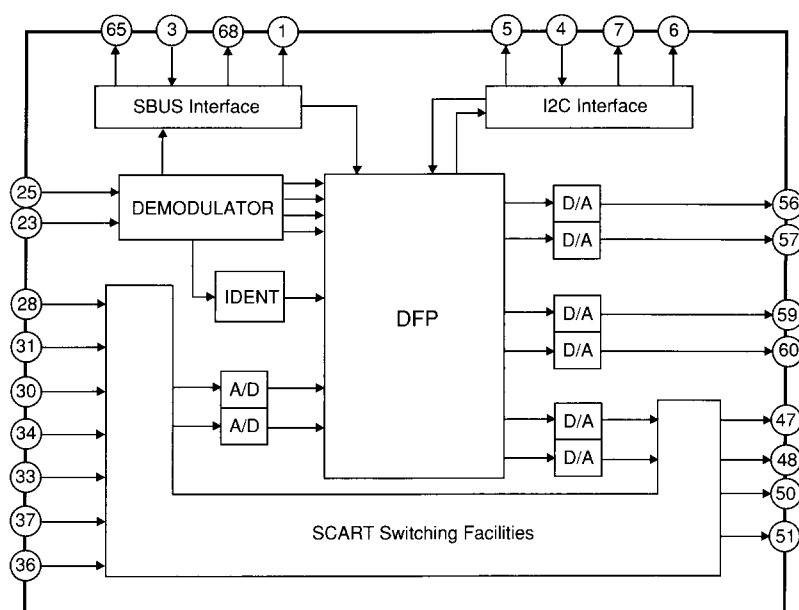
D Board IC261 TDA2822M



D Board IC802 STV9379



A Board IC201 MSP3400C-PS-C6-T/MSP3410B-PS-F7-T




## SECTION 6


### EXPLODED VIEWS

**NOTE :**

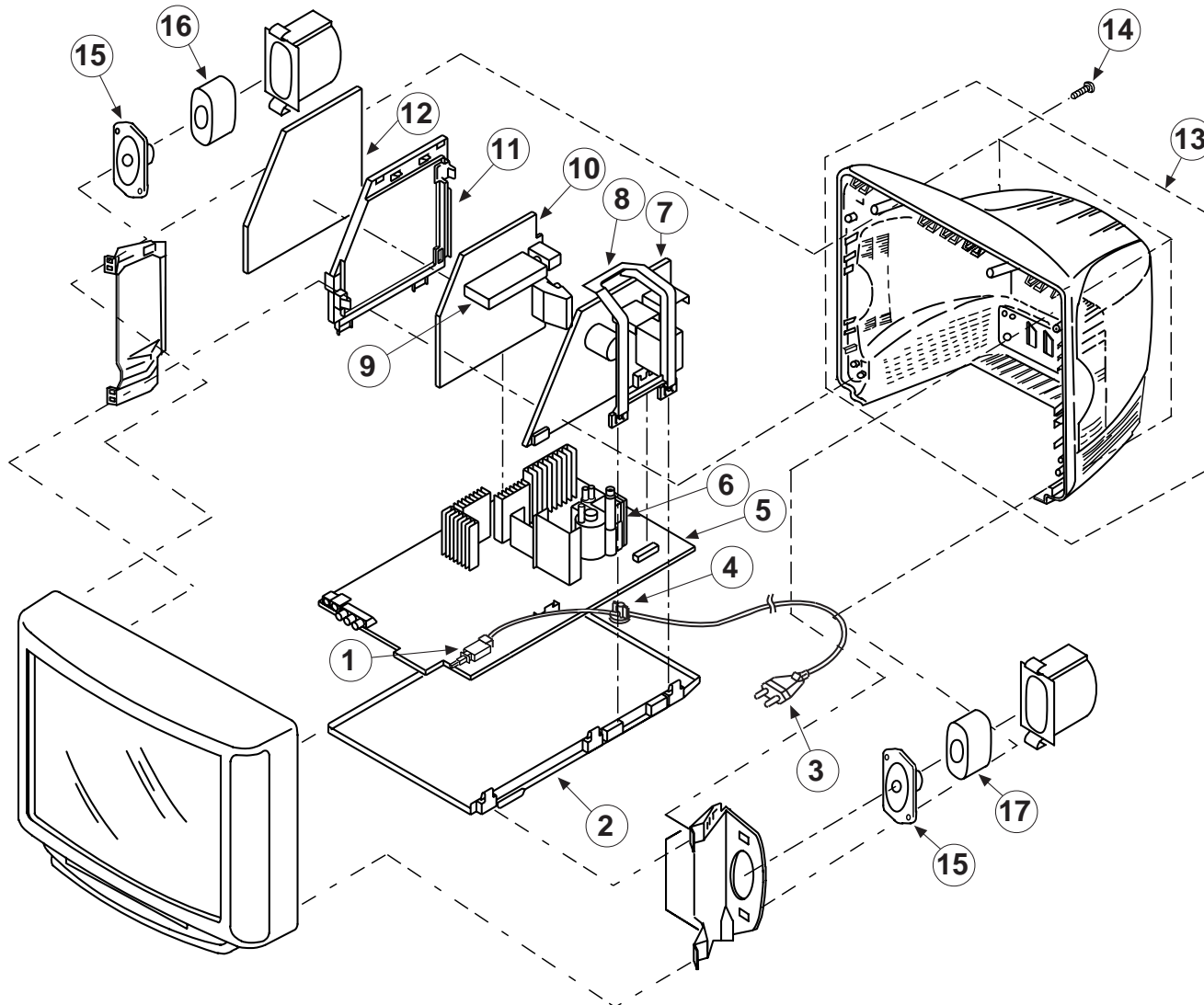
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.




The components identified by shading and marked  are critical for safety.

Replace only with the part number specified.

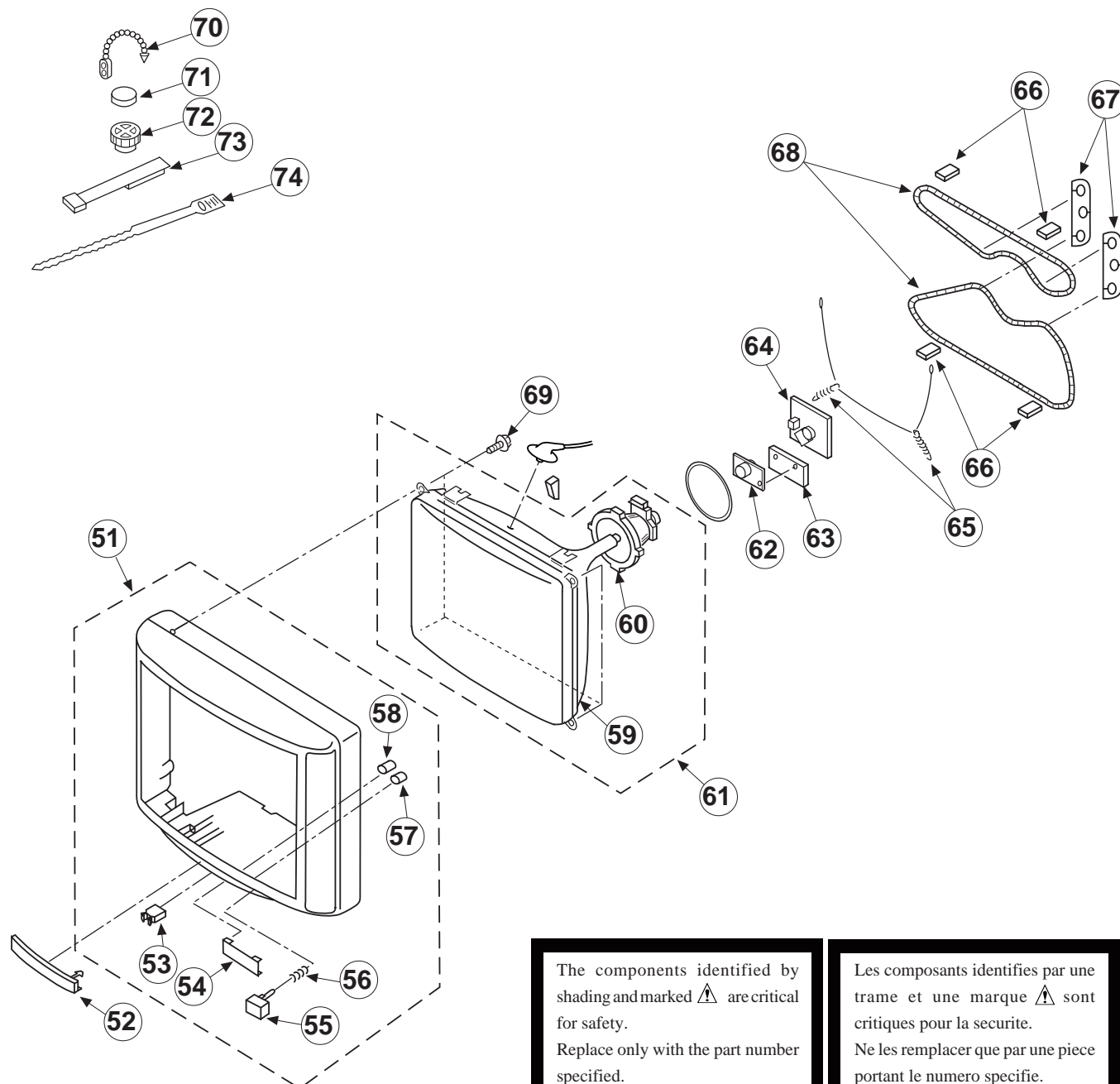
Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

**6-1. CHASSIS**

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	 1-571-433-21	SWITCH, PUSH (AC POWER)		10	*A-1632-664-A	A BOARD, COMPLETE	(KV-25X3A/25X3D)
2	*4-203-457-01	BRACKET, MAIN			*A-1632-665-A	A BOARD, COMPLETE	(KV-25X3B)
3	 1-751-680-11	CORD, POWER (WITH NOISE FILTER)			*A-1632-666-A	A BOARD, COMPLETE	(KV-25X3E)
4	*4-202-531-01	AC CORD LOCK (SC)		11	*4-203-612-01	BRACKET, A-B	
5	*A-1640-282-A	D BOARD, COMPLETE		12	*A-1620-096-A	B BOARD, COMPLETE	
6	 1-453-222-11	TRANSFORMER ASSY, FLYBACK		13	X-4200-255-1	COVER ASSY, REAR	
		(NX-4003/U2B4)		14	4-039-358-01	SCREW (4X16), (+) BV TAPPING	
7	*A-1636-024-A	G BOARD, COMPLETE		15	1-504-571-21	SPEAKER (7.5 X 13CM)	
8	*4-203-613-01	SUPPORTER, G		16	A-1676-035-A	BAFFLE (L) ASSY	
9	1-693-338-11	TUNER (TUVIF) (AEP)		17	A-1676-036-A	BAFFLE (R) ASSY	
		(KV-25X3A/25X3D/25X3E)					
	1-693-340-11	TUNER (TUVIF) (FR)	(KV-25X3B)				

## 6-2. PICTURE TUBE



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-256-4	BEZNET ASSY	53-58	63	A-1644-080-A	VM BOARD, COMPLETE	
52	4-203-364-11	DOOR, CONTROL (KV-25X3A/25X3D)		64	*A-1638-105-A	C BOARD, COMPLETE	
	4-203-364-01	DOOR, CONTROL (KV-25X3B/25X3E)		65	4-200-433-01	SPRING, EXTENSION	
53	4-047-464-01	CATCHER, PUSH		66	4-203-390-01	CUSHION, DGC	
54	4-203-365-01	WINDOW, ORNAMENTAL		67	4-202-745-01	HOLDER, DGC (25")	
55	4-203-362-01	BUTTON, POWER		68	$\triangle$ 1-406-806-21	COIL, DEGAUSSING	
56	4-202-964-01	SPRING		69	4-036-188-01	SCREW, SELF TAPPING	
57	*4-203-363-01	GUIDE, LED LIGHT		70	4-308-870-00	CLIP, LEAD WIRE	
58	4-202-465-01	GUIDE, LED LIGHT		71	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
59	$\triangle$ 8-733-243-05	PICTURE TUBE (SD-257) (M60LCS60X)		72	1-452-032-00	MAGNET, DISK; 10MM Ø	
60	$\triangle$ 8-451-474-11	DEFLECTION YOKE (Y25GXCB)		73	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
61	$\triangle$ 8-773-254-77	ITC	59-60	74	3-701-007-00	BAND, BINDING	
62	$\triangle$ 1-452-509-41	NECK ASSY, CRT (NA-308)					

## SECTION 7

### ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

## CAPACITORS

MF : mF, PF : mmF

## COILS

MMH : mH,  $\mu$ H : mH

B

• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

• All resistors are in ohms  
• F : nonflammable

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1620-096-A	B BOARD, COMPLETE *****		C1803	1-126-964-11	ELECT 10MF	20% 50V
	< CAPACITOR >			C1804	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C407	1-126-969-11	ELECT 220MF	20% 50V	C1805	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C408	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1806	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
C409	1-162-638-11	CERAMIC CHIP 1MF	16V	C1807	1-126-963-11	ELECT 4.7MF	20% 50V
C410	1-162-638-11	CERAMIC CHIP 1MF	16V	C1808	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C411	1-162-638-11	CERAMIC CHIP 1MF	16V	C1809	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C412	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C1810	1-162-638-11	CERAMIC CHIP 1MF	16V
C413	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C1811	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C414	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C1812	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C415	1-162-638-11	CERAMIC CHIP 1MF	16V	C1813	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C416	1-162-638-11	CERAMIC CHIP 1MF	16V	C1814	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C417	1-162-638-11	CERAMIC CHIP 1MF	16V	C1815	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C418	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1816	1-126-963-11	ELECT 4.7MF	20% 50V
C419	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1817	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C420	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1818	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C421	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	C1819	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C422	1-162-638-11	CERAMIC CHIP 1MF	16V	C1820	1-216-049-91	METAL GLAZE 1K 5%	1/10W
C427	1-126-963-11	ELECT 4.7MF	20% 50V	C1821	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C428	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1822	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C429	1-163-091-00	CERAMIC CHIP 8PF	0.25PF 50V	C1823	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C430	1-163-091-00	CERAMIC CHIP 8PF	0.25PF 50V	C1824	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C431	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1825	1-126-964-11	ELECT 10MF	20% 50V
C432	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1826	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C433	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1827	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C434	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C1828	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C435	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	C1829	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C438	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1830	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C439	1-126-964-11	ELECT 10MF	20% 50V	C1850	1-163-245-11	CERAMIC CHIP 56PF	5% 50V
C440	1-126-964-11	ELECT 10MF	20% 50V	C1852	1-164-695-11	CERAMIC CHIP 0.0022MF	5% 50V
C441	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C1856	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C442	1-162-587-11	CERAMIC CHIP 0.039MF	10% 25V	C1857	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C446	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C1858	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C449	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1859	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C450	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1860	1-126-961-11	ELECT 2.2MF	20% 50V
C451	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1861	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C452	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C1862	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C453	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1864	1-163-002-11	CERAMIC CHIP 270PF	10% 50V
C454	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	C1866	1-126-964-11	ELECT 10MF	20% 50V
C455	1-126-964-11	ELECT 10MF	20% 50V	C1867	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C457	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1868	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1801	1-126-963-11	ELECT 4.7MF	20% 50V	C1869	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1802	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C1870	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1871	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1872	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V



REF.NO.	PART NO.	DESCRIPTION	REMARK
C1873	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1874	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1875	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1879	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1880	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1881	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1882	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1883	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1886	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1887	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1890	1-126-964-11	ELECT 10MF	20% 50V
C1891	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1898	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1899	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C1904	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C1910	1-126-964-11	ELECT 10MF	20% 50V
C1912	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1916	1-216-043-91	METAL GLAZE 560	5% 1/10W
C1919	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1921	1-216-027-00	METAL GLAZE 120	5% 1/10W
C1947	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1948	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1953	1-216-296-91	CONDUCTOR, CHIP	
C1955	1-216-296-91	CONDUCTOR, CHIP	
< CONNECTOR >			
CN412	1-564-513-11	PLUG, CONNECTOR 10P	
CN413	*1-564-511-11	PLUG, CONNECTOR 8P	
CN417	*1-564-596-11	PLUG, CONNECTOR 15P	
CN419	*1-564-512-11	PLUG, CONNECTOR 9P	
CN1810	*1-564-512-11	PLUG, CONNECTOR 9P	
CN1815	*1-564-512-11	PLUG, CONNECTOR 9P	
< DIODE >			
D401	8-719-914-43	DIODE DAN202K	
D402	8-719-914-43	DIODE DAN202K	
D403	8-719-028-00	DIODE MA3033L	
D410	8-719-401-63	DIODE MA3062M-TX	
D411	8-719-914-43	DIODE DAN202K	
D412	8-719-914-43	DIODE DAN202K	
D415	8-719-914-43	DIODE DAN202K	
< FERRITE BEAD >			
FB401	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB402	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB403	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB404	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB405	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB406	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB407	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1801	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1802	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1803	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1804	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1805	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1806	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1813	1-216-295-91	CONDUCTOR, CHIP	
FB1815	1-216-295-91	CONDUCTOR, CHIP	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< ENCAPSULATED FILTER >			
FL1801	1-233-767-11	FILTER	
FL1803	1-415-940-11	DELAY LINE	
FL1807	1-236-071-11	ENCAPSULATED COMPONENT	
FL1808	1-236-071-11	ENCAPSULATED COMPONENT	
FL1809	1-236-071-11	ENCAPSULATED COMPONENT	
< IC >			
IC402	8-759-275-36	IC TDA4780/V3	
IC403	8-759-421-42	IC SDA9361	
IC1801	8-759-257-59	IC TDA8755T-T	
IC1802	8-759-439-63	IC SAA4945H/V1	
IC1803	8-759-439-25	IC TMS4C2972-26DTR	
IC1809	8-759-467-19	IC SDA9280B22	
IC1812	8-759-426-57	IC 74HCT4046AD	
IC1814	8-759-438-64	IC SAA4952WP/V1	
IC1815	8-759-444-24	IC 74HCT4046AD/S470	
IC1816	8-759-470-61	IC P83C654EBA/565	
IC1823	8-759-991-41	IC LM78L05ACZ	
IC1824	8-759-991-41	IC LM78L05ACZ	
IC1825	8-759-234-77	IC TC4866F	
< COIL >			
L401	1-408-429-00	INDUCTOR	470UH
L402	1-408-429-00	INDUCTOR	470UH
L407	1-410-999-11	INDUCTOR CHIP	3.3UH
L1801	1-410-435-21	INDUCTOR	220UH
L1802	1-410-435-21	INDUCTOR	220UH
L1803	1-408-403-00	INDUCTOR	3.3UH
L1804	1-408-409-00	INDUCTOR	10UH
L1805	1-410-999-11	INDUCTOR CHIP	3.3UH
L1811	1-216-295-91	CONDUCTOR, CHIP	
L1813	1-216-295-91	CONDUCTOR, CHIP	
L1814	1-408-403-00	INDUCTOR	3.3UH
< TRANSISTOR >			
Q411	8-729-901-06	TRANSISTOR DTA144EK	
Q412	8-729-901-06	TRANSISTOR DTA144EK	
Q413	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q415	8-729-900-53	TRANSISTOR DTC114EK	
Q416	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1801	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1802	8-729-901-01	TRANSISTOR DTC144EK	
Q1804	8-729-901-01	TRANSISTOR DTC144EK	
Q1805	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1808	8-729-901-01	TRANSISTOR DTC144EK	
Q1809	8-729-901-01	TRANSISTOR DTC144EK	
Q1810	8-729-901-01	TRANSISTOR DTC144EK	
Q1812	8-729-620-06	TRANSISTOR 2SC3052-EF	
< RESISTOR >			
JR401	1-216-295-91	CONDUCTOR, CHIP	
JR402	1-216-295-91	CONDUCTOR, CHIP	
JR403	1-216-295-91	CONDUCTOR, CHIP	
JR404	1-216-295-91	CONDUCTOR, CHIP	
JR405	1-216-295-91	CONDUCTOR, CHIP	
JR406	1-216-295-91	CONDUCTOR, CHIP	
JR407	1-216-295-91	CONDUCTOR, CHIP	
JR408	1-216-295-91	CONDUCTOR, CHIP	
JR409	1-216-049-91	METAL GLAZE 1K	5% 1/10W



B

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
JR414	1-216-295-91	CONDUCTOR, CHIP				R456	1-216-097-91	METAL GLAZE 100K 5%	1/10W		
JR415	1-216-295-91	CONDUCTOR, CHIP				R457	1-216-099-00	METAL GLAZE 120K 5%	1/10W		
JR417	1-216-295-91	CONDUCTOR, CHIP				R458	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR418	1-216-295-91	CONDUCTOR, CHIP				R459	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR420	1-216-295-91	CONDUCTOR, CHIP									
JR421	1-216-295-91	CONDUCTOR, CHIP				R463	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR422	1-216-295-91	CONDUCTOR, CHIP				R465	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
JR423	1-216-295-91	CONDUCTOR, CHIP				R466	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR424	1-216-295-91	CONDUCTOR, CHIP				R467	1-216-041-00	METAL GLAZE 470 5%	1/10W		
JR426	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		R468	1-216-025-91	METAL GLAZE 100 5%	1/10W		
JR1814	1-216-295-91	CONDUCTOR, CHIP				R469	1-216-025-91	METAL GLAZE 100 5%	1/10W		
JR1815	1-216-295-91	CONDUCTOR, CHIP				R470	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W		
JR1816	1-216-035-00	METAL GLAZE 270 5%	1/10W			R473	1-216-081-00	METAL GLAZE 22K 5%	1/10W		
JR1817	1-216-035-00	METAL GLAZE 270 5%	1/10W			R477	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
JR1818	1-216-035-00	METAL GLAZE 270 5%	1/10W			R483	1-216-063-91	METAL GLAZE 3.9K 5%	1/10W		
JR1819	1-216-035-00	METAL GLAZE 270 5%	1/10W								
JR1820	1-216-035-00	METAL GLAZE 270 5%	1/10W			R484	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR1821	1-216-035-00	METAL GLAZE 270 5%	1/10W			R487	1-216-295-91	CONDUCTOR, CHIP			
JR1822	1-216-035-00	METAL GLAZE 270 5%	1/10W			R488	1-216-107-00	METAL GLAZE 270K 5%	1/10W		
JR1823	1-216-035-00	METAL GLAZE 270 5%	1/10W			R490	1-216-295-91	CONDUCTOR, CHIP			
JR1824	1-216-035-00	METAL GLAZE 270 5%	1/10W			R491	1-216-107-00	METAL GLAZE 270K 5%	1/10W		
JR1825	1-216-035-00	METAL GLAZE 270 5%	1/10W								
JR1826	1-216-035-00	METAL GLAZE 270 5%	1/10W			R499	1-216-025-91	METAL GLAZE 100 5%	1/10W		
JR1827	1-216-035-00	METAL GLAZE 270 5%	1/10W			R1801	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W		
JR1840	1-216-295-91	CONDUCTOR, CHIP				R1802	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR1843	1-216-295-91	CONDUCTOR, CHIP				R1803	1-216-295-91	CONDUCTOR, CHIP			
JR1845	1-216-295-91	CONDUCTOR, CHIP				R1804	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W		
JR1846	1-216-295-91	CONDUCTOR, CHIP									
JR1866	1-216-295-91	CONDUCTOR, CHIP				R1805	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR1868	1-216-295-91	CONDUCTOR, CHIP				R1806	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W		
JR1869	1-216-295-91	CONDUCTOR, CHIP				R1807	1-216-049-91	METAL GLAZE 1K 5%	1/10W		
JR1870	1-216-295-91	CONDUCTOR, CHIP				R1808	1-216-295-91	CONDUCTOR, CHIP			
JR1871	1-216-295-91	CONDUCTOR, CHIP				R1809	1-216-033-00	METAL GLAZE 220 5%	1/10W		
JR1872	1-216-295-91	CONDUCTOR, CHIP									
JR1873	1-216-295-91	CONDUCTOR, CHIP				R1810	1-216-076-00	METAL GLAZE 13K 5%	1/10W		
JR1874	1-216-295-91	CONDUCTOR, CHIP				R1811	1-216-025-91	METAL GLAZE 100 5%	1/10W		
JR1875	1-216-295-91	CONDUCTOR, CHIP				R1812	1-216-033-00	METAL GLAZE 220 5%	1/10W		
JR1890	1-216-295-91	CONDUCTOR, CHIP				R1813	1-216-045-00	METAL GLAZE 680 5%	1/10W		
JR1891	1-216-295-91	CONDUCTOR, CHIP				R1814	1-216-031-00	METAL GLAZE 180 5%	1/10W		
JR1893	1-216-295-91	CONDUCTOR, CHIP									
JR1894	1-216-295-91	CONDUCTOR, CHIP				R1815	1-216-037-00	METAL GLAZE 330 5%	1/10W		
JR1901	1-216-295-91	CONDUCTOR, CHIP				R1816	1-216-295-91	CONDUCTOR, CHIP			
JR1905	1-216-295-91	CONDUCTOR, CHIP				R1817	1-216-037-00	METAL GLAZE 330 5%	1/10W		
JR1910	1-216-295-91	CONDUCTOR, CHIP				R1818	1-216-037-00	METAL GLAZE 330 5%	1/10W		
R408	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W			R1819	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R409	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W								
R439	1-216-093-00	METAL GLAZE 68K 5%	1/10W			R1820	1-216-029-00	METAL GLAZE 150 5%	1/10W		
R443	1-216-025-91	METAL GLAZE 100 5%	1/10W			R1821	1-216-023-00	METAL GLAZE 82 5%	1/10W		
R444	1-216-025-91	METAL GLAZE 100 5%	1/10W			R1822	1-216-295-91	CONDUCTOR, CHIP			
R445	1-216-025-91	METAL GLAZE 100 5%	1/10W			R1831	1-216-081-00	METAL GLAZE 22K 5%	1/10W		
R446	1-216-025-91	METAL GLAZE 100 5%	1/10W			R1832	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W		
R447	1-216-025-91	METAL GLAZE 100 5%	1/10W								
R448	1-216-043-91	METAL GLAZE 560 5%	1/10W			R1833	1-216-295-91	CONDUCTOR, CHIP			
R449	1-216-049-91	METAL GLAZE 1K 5%	1/10W			R1834	1-216-115-00	METAL GLAZE 560K 5%	1/10W		
R450	1-216-099-00	METAL GLAZE 120K 5%	1/10W			R1835	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R451	1-216-101-00	METAL GLAZE 150K 5%	1/10W			R1844	1-216-081-00	METAL GLAZE 22K 5%	1/10W		
R452	1-216-073-00	METAL GLAZE 10K 5%	1/10W			R1845	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W		
R453	1-216-017-91	METAL GLAZE 47 5%	1/10W								
R454	1-216-017-91	METAL GLAZE 47 5%	1/10W			R1846	1-216-077-00	METAL GLAZE 15K 5%	1/10W		
R455	1-216-063-91	METAL GLAZE 3.9K 5%	1/10W			R1848	1-216-025-91	METAL GLAZE 100 5%	1/10W		
						R1849	1-216-001-00	METAL GLAZE 10 5%	1/10W		
						R1850	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1851	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1852	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1853	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1854	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1855	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1856	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1857	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
						R1858	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1859	1-216-017-91	METAL GLAZE 47	5% 1/10W	C114	1-164-346-11	CERAMIC CHIP 1MF	16V
R1861	1-216-295-91	CONDUCTOR, CHIP		C116	1-126-967-11	ELECT 47MF	20% 16V
R1864	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W	C117	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
				C118	1-126-967-11	ELECT 47MF	20% 16V
R1866	1-216-089-91	METAL GLAZE 47K	5% 1/10W	C119	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
R1867	1-216-075-00	METAL GLAZE 12K	5% 1/10W	C120	1-126-964-11	ELECT 10MF	20% 50V
R1868	1-216-089-91	METAL GLAZE 47K	5% 1/10W	C121	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
R1869	1-216-049-91	METAL GLAZE 1K	5% 1/10W	C122	1-164-346-11	CERAMIC CHIP 1MF	16V
R1871	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W	C126	1-126-967-11	ELECT 47MF	20% 16V
R1878	1-216-295-91	CONDUCTOR, CHIP		C127	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
R1879	1-216-049-91	METAL GLAZE 1K	5% 1/10W	C128	1-126-967-11	ELECT 47MF	20% 16V
R1880	1-216-085-00	METAL GLAZE 33K	5% 1/10W	C129	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
R1881	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	C130	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
R1882	1-216-085-00	METAL GLAZE 33K	5% 1/10W	C131	1-164-346-11	CERAMIC CHIP 1MF	16V
R1885	1-216-049-91	METAL GLAZE 1K	5% 1/10W	C132	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
R1886	1-216-295-91	CONDUCTOR, CHIP		C133	1-164-346-11	CERAMIC CHIP 1MF	16V
R1888	1-216-021-00	METAL GLAZE 68	5% 1/10W	C134	1-126-964-11	ELECT 10MF	20% 50V
R1890	1-216-295-91	CONDUCTOR, CHIP		C135	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
R1891	1-216-295-91	CONDUCTOR, CHIP		C136	1-126-964-11	ELECT 10MF	20% 50V
R1892	1-216-295-91	CONDUCTOR, CHIP		C137	1-164-506-11	CERAMIC CHIP 4.7MF	16V
R1893	1-216-295-91	CONDUCTOR, CHIP		C140	1-164-506-11	CERAMIC CHIP 4.7MF	16V
R1894	1-216-047-91	METAL GLAZE 820	5% 1/10W	C141	1-164-506-11	CERAMIC CHIP 4.7MF	16V
R1895	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W	C143	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
R1896	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W				(KV-25X3B)
R1897	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	C144	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
R1901	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W				(KV-25X3B)
R1902	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C145	1-163-249-11	CERAMIC CHIP 82PF	5% 50V
R1903	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W				(KV-25X3B)
R1904	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C146	1-164-346-11	CERAMIC CHIP 1MF	16V
R1905	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C150	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R1906	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C151	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R1907	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C152	1-126-964-11	ELECT 10MF	20% 50V
R1908	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C153	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
R1909	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C154	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
R1910	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C155	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R1911	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C156	1-164-506-11	CERAMIC CHIP 4.7MF	16V
R1912	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W	C157	1-164-506-11	CERAMIC CHIP 4.7MF	16V
R1920	1-216-295-91	CONDUCTOR, CHIP		C159	1-164-505-11	CERAMIC CHIP 2.2MF	16V
R1922	1-216-025-91	METAL GLAZE 100	5% 1/10W	C160	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
R1934	1-216-115-00	METAL GLAZE 560K	5% 1/10W	C162	1-164-346-11	CERAMIC CHIP 1MF	16V
R1940	1-216-025-91	METAL GLAZE 100	5% 1/10W	C163	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
< CRYSTAL >				C164	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
X401	1-767-343-21	VIBRATOR, CRYSTAL		C165	1-164-346-11	CERAMIC CHIP 1MF	16V
X1801	1-579-175-11	VIBRATOR, CERAMIC		C166	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
*****				C167	1-164-222-11	CERAMIC CHIP 0.22MF	25V
				C200	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
*A-1632-664-A	A BOARD, COMPLETE	(KV-25X3A/25X3D)		C201	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
	*****			C202	1-164-506-11	CERAMIC CHIP 4.7MF	16V
*A-1632-665-A	A BOARD, COMPLETE	(KV-25X3B)		C203	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	*****			C204	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V
*A-1632-666-A	A BOARD, COMPLETE	(KV-25X3E)		C205	1-164-506-11	CERAMIC CHIP 4.7MF	16V
	*****			C206	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
< CAPACITOR >				C207	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
C101	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C208	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
C102	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C209	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
C103	1-163-253-11	CERAMIC CHIP 120PF	5% 50V	C210	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V
			(KV-25X3B)	C211	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C105	1-126-965-11	ELECT 22MF	20% 50V	C212	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C111	1-126-964-11	ELECT 10MF	20% 50V	C213	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C112	1-164-346-11	CERAMIC CHIP 1MF	16V	C214	1-164-506-11	CERAMIC CHIP 4.7MF	16V
				C215	1-164-506-11	CERAMIC CHIP 4.7MF	16V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C216	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1039	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C217	1-126-964-11	ELECT 10MF	20% 50V	C1040	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C218	1-126-964-11	ELECT 10MF	20% 50V	C1041	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C219	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C1042	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C220	1-163-131-00	CERAMIC CHIP 390PF	5% 50V				
C221	1-163-275-11	CERAMIC CHIP 0.001MF	5% 50V	C1043	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C222	1-163-275-11	CERAMIC CHIP 0.001MF	5% 50V	C1050	1-104-661-91	ELECT 330MF	20% 16V
C223	1-163-275-11	CERAMIC CHIP 0.001MF	5% 50V	C1060	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C224	1-163-275-11	CERAMIC CHIP 0.001MF	5% 50V	C1061	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C227	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V	C1301	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C228	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V	C1401	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C229	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1402	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C230	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1403	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C231	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V	C1404	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C232	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V	C1405	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C233	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C1406	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C234	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C1407	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C303	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1408	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C304	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1409	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V
C305	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1413	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C306	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1414	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C307	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1417	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C308	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1418	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C309	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1420	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C310	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1421	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C311	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1430	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1431	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C313	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1432	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C314	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1433	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C315	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1434	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C316	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1435	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C317	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1437	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C318	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C1438	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C319	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C1439	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C320	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V	C1441	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C321	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1442	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C322	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1443	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C323	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1444	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C324	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1445	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C325	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1446	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C350	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1447	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V
C351	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1448	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V
C355	1-163-231-11	CERAMIC CHIP 15PF	5% 50V	C1450	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C356	1-163-231-11	CERAMIC CHIP 15PF	5% 50V	C1451	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C357	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	C1452	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C360	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C1460	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C1001	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1461	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C1002	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1462	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1003	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C1465	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C1004	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C2001	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C1005	1-164-506-11	CERAMIC CHIP 4.7MF	16V	C2002	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C1006	1-165-321-11	CERAMIC CHIP 0.68MF	10% 16V	C2004	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C1007	1-164-157-11	CERAMIC CHIP 0.068MF	10% 25V	C2005	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C1010	1-126-933-11	ELECT 100MF	20% 16V	C2007	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1020	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C2020	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C1021	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C2021	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C1022	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C2023	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1035	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C2024	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1036	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2025	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1037	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C2026	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1038	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C2028	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C2029	1-164-222-11	CERAMIC CHIP 0.22MF	25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C2030	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	< ENCAPSULATED FILTER >			
C2031	1-164-222-11	CERAMIC CHIP 0.22MF	25V	FL102	1-236-071-11	ENCAPSULATED COMPONENT	
C2033	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	FL103	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
< FILTER >				FL200	1-236-071-11	ENCAPSULATED COMPONENT	
CD1001	1-527-992-31	OSCILLATOR, CERAMIC		FL201	1-233-764-21	FILTER	
CF200	1-409-327-00	TRAP, CERAMIC (6.5MHZ)		FL202	1-236-071-11	ENCAPSULATED COMPONENT	
< CONNECTOR >				FL203	1-236-071-11	ENCAPSULATED COMPONENT	
CN101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P		FL302	1-236-071-11	ENCAPSULATED COMPONENT	
CN115	*1-564-524-11	PLUG, CONNECTOR 9P		FL1001	1-236-071-11	ENCAPSULATED COMPONENT	
CN201	1-766-296-11	CONNECTOR, DUAL SCART		FL1002	1-236-071-11	ENCAPSULATED COMPONENT	
CN310	1-900-901-84	CONNECTOR ASSY, MICRO 9P		FL1402	1-236-071-11	ENCAPSULATED COMPONENT	
CN1413	1-564-523-11	PLUG, CONNECTOR 8P		FL1403	1-236-071-11	ENCAPSULATED COMPONENT	
CN2012	*1-564-525-11	PLUG, CONNECTOR 10P		FL1404	1-236-071-11	ENCAPSULATED COMPONENT	
CP101	1-473-953-11	ADAPTOR, IEC		FL1405	1-236-071-11	ENCAPSULATED COMPONENT	
< DIODE >				FL2001	1-236-071-11	ENCAPSULATED COMPONENT	
D102	8-719-158-49	DIODE RD12SB2		FL2003	1-236-071-11	ENCAPSULATED COMPONENT	
D103	8-719-158-49	DIODE RD12SB2		< IC >			
D104	8-719-158-49	DIODE RD12SB2		IC101	8-752-068-45	IC CXA1855Q	
D105	8-719-158-49	DIODE RD12SB2		IC102	8-759-267-25	IC LM2940CT-9.0	
D199	8-719-914-43	DIODE DAN202K		IC104	8-759-514-57	IC BA7046F	
D200	8-719-158-49	DIODE RD12SB2		IC201	8-759-438-00	IC MSP3400C-PS-C6-T	(KV-25X3A/25X3D)
D201	8-719-158-49	DIODE RD12SB2			8-759-437-33	IC MSP3410B-PS-F7-T-ND	(KV-25X3B/25X3E)
D202	8-719-158-49	DIODE RD12SB2		IC302	8-759-447-68	IC TDA9143/N1	
D203	8-719-158-49	DIODE RD12SB2		IC303	8-759-288-85	IC TDA4665T-T	
D204	8-719-158-49	DIODE RD12SB2		IC1001	8-759-442-44	IC SDA30C164-2-GEG	
D205	8-719-158-49	DIODE RD12SB2		IC1002	8-759-444-64	IC 15C1-AE405	
D206	8-719-158-49	DIODE RD12SB2			1-750-797-11	SOCKET, PLCC (IC1002)	
D207	8-719-158-49	DIODE RD12SB2		IC1003	8-759-378-21	IC ST24C16FB6	
D208	8-719-158-49	DIODE RD12SB2		IC1004	8-759-259-18	IC MB3793-42PNF	
D209	8-719-158-49	DIODE RD12SB2		IC1006	8-759-988-13	IC LM393PS	
D210	8-719-158-49	DIODE RD12SB2		IC1401	8-759-447-68	IC TDA9143/N1	
D211	8-719-158-49	DIODE RD12SB2		IC1403	8-759-438-61	IC SDA9288X-A141	
D212	8-719-158-49	DIODE RD12SB2		IC2001	8-759-452-22	IC SDA5273P-C134-G	
D213	8-719-158-49	DIODE RD12SB2		< COIL >			
D214	8-719-158-49	DIODE RD12SB2		L101	1-412-751-11	INDUCTOR 18UH	(KV-25X3B)
D215	8-719-158-49	DIODE RD12SB2		L321	1-412-006-31	INDUCTOR CHIP 10UH	
D217	8-719-158-49	DIODE RD12SB2		L1401	1-410-428-11	INDUCTOR 56UH	
D218	8-719-158-49	DIODE RD12SB2		< TRANSISTOR >			
D219	8-719-158-49	DIODE RD12SB2		Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
D220	8-719-158-49	DIODE RD12SB2		Q103	8-729-039-67	TRANSISTOR BSS83	(KV-25X3B)
D221	8-719-158-49	DIODE RD12SB2		Q104	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-25X3B)
D301	8-719-401-41	DIODE MA3051L-TX		Q106	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-25X3B)
D305	8-719-988-62	DIODE 1SS355		Q107	8-729-216-22	TRANSISTOR 2SA1162-G	
D1007	8-719-914-44	DIODE DAP202K		Q108	8-729-620-06	TRANSISTOR 2SC3052-EF	
D1008	8-719-914-43	DIODE DAN202K		Q109	8-729-216-22	TRANSISTOR 2SA1162-G	
D1009	8-719-105-91	DIODE RD5.6M-B2		Q110	8-729-038-96	TRANSISTOR IMZ1A-T109	
D1010	8-719-105-91	DIODE RD5.6M-B2		Q112	8-729-216-22	TRANSISTOR 2SA1162-G	
D1012	8-719-914-43	DIODE DAN202K		Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
D1403	8-719-988-62	DIODE 1SS355		Q120	8-729-901-00	TRANSISTOR DTC124E	
D1405	8-719-914-42	DIODE DA204K		Q200	8-729-620-06	TRANSISTOR 2SC3052-EF	
< FERRITE BEAD >				Q205	8-729-620-06	TRANSISTOR 2SC3052-EF	
FB101	1-414-235-11	INDUCTOR, FERRITE BEAD		Q301	8-729-620-06	TRANSISTOR 2SC3052-EF	
FB102	1-414-235-11	INDUCTOR, FERRITE BEAD		Q302	8-729-620-06	TRANSISTOR 2SC3052-EF	
FB2001	1-216-295-91	CONDUCTOR, CHIP		Q315	8-729-038-96	TRANSISTOR IMZ1A-T109	
				Q316	8-729-038-96	TRANSISTOR IMZ1A-T109	
				Q317	8-729-038-96	TRANSISTOR IMZ1A-T109	
				Q1001	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-25X3B)

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REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1015	8-729-900-53	TRANSISTOR DTC114EK	
Q1301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1311	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1312	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1401	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1402	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1403	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1404	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1411	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1412	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q2005	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q2006	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q2007	8-729-027-59	TRANSISTOR DTC144EKA-T146	
< RESISTOR >			
JR201	1-216-295-91	CONDUCTOR, CHIP	
JR202	1-216-295-91	CONDUCTOR, CHIP	
JR301	1-216-295-91	CONDUCTOR, CHIP	
JR302	1-216-295-91	CONDUCTOR, CHIP	
JR303	1-216-295-91	CONDUCTOR, CHIP	
JR1001	1-216-295-91	CONDUCTOR, CHIP	
JR1002	1-216-295-91	CONDUCTOR, CHIP	
JR1003	1-216-295-91	CONDUCTOR, CHIP	
JR1004	1-216-295-91	CONDUCTOR, CHIP	
JR1008	1-216-025-91	METAL GLAZE 100 5%	1/10W
JR1009	1-216-025-91	METAL GLAZE 100 5%	1/10W
JR1010	1-216-025-91	METAL GLAZE 100 5%	1/10W
JR1011	1-216-025-91	METAL GLAZE 100 5%	1/10W
JR1301	1-216-295-91	CONDUCTOR, CHIP	
JR1302	1-216-295-91	CONDUCTOR, CHIP	
JR1402	1-216-295-91	CONDUCTOR, CHIP	
JR1403	1-216-295-91	CONDUCTOR, CHIP	
R101	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R102	1-216-025-91	METAL GLAZE 100 5%	1/10W
R103	1-216-025-91	METAL GLAZE 100 5%	1/10W
R104	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R106	1-216-033-00	METAL GLAZE 220 5%	1/10W
R107	1-216-295-91	CONDUCTOR CHIP (KV-25X3A/25X3D/25X3E)	
R108	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R109	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R110	1-216-097-91	METAL GLAZE 100K 5%	1/10W
R111	1-216-041-00	METAL GLAZE 470 5%	1/10W
R112	1-216-041-00	METAL GLAZE 470 5%	1/10W
R113	1-216-041-00	METAL GLAZE 470 5%	1/10W
R114	1-216-311-00	METAL GLAZE 6.8 5%	1/10W
R115	1-216-311-00	METAL GLAZE 6.8 5%	1/10W
R116	1-216-311-00	METAL GLAZE 6.8 5%	1/10W
R117	1-216-022-00	METAL GLAZE 75 5%	1/10W
R118	1-216-022-00	METAL GLAZE 75 5%	1/10W
R119	1-216-022-00	METAL GLAZE 75 5%	1/10W
R120	1-216-022-00	METAL GLAZE 75 5%	1/10W
R121	1-216-022-00	METAL GLAZE 75 5%	1/10W
R122	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R123	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R124	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R126	1-216-039-00	METAL GLAZE 390 5%	1/10W
R127	1-216-039-00	METAL GLAZE 390 5%	1/10W
R128	1-216-113-00	METAL GLAZE 470K 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R129	1-216-643-11	METAL CHIP 470 0.50%	1/10W (KV-25X3B)
R130	1-216-039-00	METAL GLAZE 390 5%	1/10W
R131	1-216-039-00	METAL GLAZE 390 5%	1/10W
R132	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R133	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R134	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R135	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R136	1-216-022-00	METAL GLAZE 75 5%	1/10W
R137	1-216-033-00	METAL GLAZE 220 5%	1/10W
R138	1-216-022-00	METAL GLAZE 75 5%	1/10W
R139	1-216-033-00	METAL GLAZE 220 5%	1/10W
R141	1-216-033-00	METAL GLAZE 220 5%	1/10W
R142	1-216-033-00	METAL GLAZE 220 5%	1/10W
R143	1-216-025-91	METAL GLAZE 100 5%	1/10W
R144	1-216-025-91	METAL GLAZE 100 5%	1/10W
R148	1-216-643-11	METAL CHIP 470 0.50%	1/10W (KV-25X3B)
R149	1-216-073-00	METAL GLAZE 10K 5%	1/10W (KV-25X3B)
R150	1-216-049-91	METAL GLAZE 1K 5%	1/10W (KV-25X3B)
R151	1-216-643-11	METAL CHIP 470 0.50%	1/10W (KV-25X3B)
R152	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R153	1-216-311-00	METAL GLAZE 6.8 5%	1/10W
R154	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R156	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W (KV-25X3B)
R157	1-216-025-91	METAL GLAZE 100 5%	1/10W (KV-25X3B)
R159	1-216-304-11	METAL GLAZE 3.3 5%	1/10W
R160	1-216-039-00	METAL GLAZE 390 5%	1/10W
R162	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R163	1-216-039-00	METAL GLAZE 390 5%	1/10W
R164	1-216-025-91	METAL GLAZE 100 5%	1/10W
R165	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R166	1-216-039-00	METAL GLAZE 390 5%	1/10W
R167	1-216-039-00	METAL GLAZE 390 5%	1/10W
R168	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R169	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R170	1-216-021-00	METAL GLAZE 68 5%	1/10W
R171	1-216-021-00	METAL GLAZE 68 5%	1/10W
R172	1-216-021-00	METAL GLAZE 68 5%	1/10W
R173	1-216-021-00	METAL GLAZE 68 5%	1/10W
R174	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R175	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R176	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R177	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R178	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R179	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R180	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R181	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
R182	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
R183	1-216-033-00	METAL GLAZE 220 5%	1/10W
R184	1-216-033-00	METAL GLAZE 220 5%	1/10W
R185	1-216-033-00	METAL GLAZE 220 5%	1/10W
R186	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R187	1-216-107-00	METAL GLAZE 270K 5%	1/10W
R188	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R189	1-218-755-11	METAL CHIP 130K 0.50%	1/10W



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R190	1-216-075-00	METAL GLAZE 12K 5%	1/10W	R1042	1-216-025-91	METAL GLAZE 100 5%	1/10W
R191	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R1044	1-216-025-91	METAL GLAZE 100 5%	1/10W
R192	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1045	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R193	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1046	1-216-025-91	METAL GLAZE 100 5%	1/10W
R194	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1050	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R195	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1051	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R196	1-216-113-00	METAL GLAZE 470K 5%	1/10W	R1052	1-216-041-00	METAL GLAZE 470 5%	1/10W
R197	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1053	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R198	1-216-113-00	METAL GLAZE 470K 5%	1/10W	R1056	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R199	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R1059	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R200	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1060	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R201	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1061	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R202	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R1062	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R203	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R1063	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R204	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1070	1-216-295-91	CONDUCTOR, CHIP	
R205	1-216-037-00	METAL GLAZE 330 5%	1/10W	R1071	1-216-295-91	CONDUCTOR, CHIP	
R207	1-216-039-00	METAL GLAZE 390 5%	1/10W	R1075	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R208	1-216-039-00	METAL GLAZE 390 5%	1/10W	R1076	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R213	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1077	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R214	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1078	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R215	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1079	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R230	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R1301	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R272	1-216-295-91	CONDUCTOR, CHIP		R1302	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R311	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R1303	1-216-037-00	METAL GLAZE 330 5%	1/10W
R312	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R1304	1-216-037-00	METAL GLAZE 330 5%	1/10W
R313	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1325	1-216-009-00	METAL GLAZE 22 5%	1/10W
R314	1-216-033-00	METAL GLAZE 220 5%	1/10W	R1340	1-216-037-00	METAL GLAZE 330 5%	1/10W
R315	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R1341	1-216-017-91	METAL GLAZE 47 5%	1/10W
R317	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R1342	1-216-017-91	METAL GLAZE 47 5%	1/10W
R318	1-220-860-91	RESISTER 0		R1344	1-216-037-00	METAL GLAZE 330 5%	1/10W
R330	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1401	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R331	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1402	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R332	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1403	1-216-025-91	METAL GLAZE 100 5%	1/10W
R333	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1404	1-216-025-91	METAL GLAZE 100 5%	1/10W
R334	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1406	1-216-037-00	METAL GLAZE 330 5%	1/10W
R335	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1407	1-216-037-00	METAL GLAZE 330 5%	1/10W
R336	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1408	1-220-860-91	RESISTER 0	
R337	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1410	1-216-041-00	METAL GLAZE 470 5%	1/10W
R338	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1411	1-216-041-00	METAL GLAZE 470 5%	1/10W
R340	1-216-017-91	METAL GLAZE 47 5%	1/10W	R1412	1-216-041-00	METAL GLAZE 470 5%	1/10W
R341	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1413	1-216-041-00	METAL GLAZE 470 5%	1/10W
R342	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1414	1-216-041-00	METAL GLAZE 470 5%	1/10W
R345	1-216-025-91	METAL GLAZE 100 5%	1/10W	R1415	1-216-041-00	METAL GLAZE 470 5%	1/10W
R351	1-216-037-00	METAL GLAZE 330 5%	1/10W	R1416	1-216-041-00	METAL GLAZE 470 5%	1/10W
R352	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1417	1-216-041-00	METAL GLAZE 470 5%	1/10W
R353	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1418	1-216-041-00	METAL GLAZE 470 5%	1/10W
R355	1-216-284-00	METAL GLAZE 3.9M 5%	1/8W	R1420	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R374	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1421	1-216-047-91	METAL GLAZE 820 5%	1/10W
R1001	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1422	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1011	1-216-295-91	CONDUCTOR, CHIP		R1423	1-216-045-00	METAL GLAZE 680 5%	1/10W
R1012	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1424	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1030	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1425	1-216-047-91	METAL GLAZE 820 5%	1/10W
R1033	1-216-295-91	CONDUCTOR, CHIP		R1430	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1034	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1431	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1036	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1433	1-216-043-91	METAL GLAZE 560 5%	1/10W
R1037	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1434	1-216-043-91	METAL GLAZE 560 5%	1/10W
R1038	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1435	1-216-043-91	METAL GLAZE 560 5%	1/10W
R1039	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1436	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R1040	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1440	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1041	1-216-049-91	METAL GLAZE 1K 5%	1/10W	R1441	1-216-049-91	METAL GLAZE 1K 5%	1/10W

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G

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1442	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1450	1-216-029-00	METAL GLAZE 150 5%	1/10W
R1451	1-216-029-00	METAL GLAZE 150 5%	1/10W
R1452	1-216-029-00	METAL GLAZE 150 5%	1/10W
R1455	1-216-284-00	METAL GLAZE 3.9M 5%	1/8W
R1461	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1462	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R2001	1-216-025-91	METAL GLAZE 100 5%	1/10W
R2002	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R2019	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R2020	1-216-041-00	METAL GLAZE 470 5%	1/10W
R2021	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R2022	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2023	1-216-063-91	METAL GLAZE 3.9K 5%	1/10W
R2024	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R2025	1-216-025-91	METAL GLAZE 100 5%	1/10W
R2026	1-216-025-91	METAL GLAZE 100 5%	1/10W
R2027	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R2028	1-216-009-00	METAL GLAZE 22 5%	1/10W
R2031	1-216-017-91	METAL GLAZE 47 5%	1/10W
R2032	1-216-017-91	METAL GLAZE 47 5%	1/10W
R2033	1-216-017-91	METAL GLAZE 47 5%	1/10W
R2034	1-216-295-91	CONDUCTOR, CHIP	
R2035	1-216-017-91	METAL GLAZE 47 5%	1/10W
R2037	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R2040	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2041	1-216-025-91	METAL GLAZE 100 5%	1/10W
< TUNER >			
TU101	1-693-338-11	TUNER (TUVIF)(AEP)	(KV-25X3A/25X3D/25X3E)
	1-693-340-11	TUNER (TUVIF)(FR)	(KV-25X3B)
< CRYSTAL >			
X200	1-760-628-11	VIBRATOR, CRYSTAL	
X301	1-567-505-11	OSCILLATOR, CRYSTAL	
X302	1-567-504-11	OSCILLATOR, CRYSTAL	
X1001	1-760-551-21	VIBRATOR, CERAMIC	
X1401	1-567-505-11	OSCILLATOR, CRYSTAL	
X1402	1-567-504-11	OSCILLATOR, CRYSTAL	
X1403	1-760-551-21	VIBRATOR, CERAMIC	
*****			
*A-1636-024-A G BOARD, COMPLETE			
*****			
< CAPACITOR >			
C602	1-165-127-11	CERAMIC 470PF	10% 500V
C603	1-165-127-11	CERAMIC 470PF	10% 500V
C604	1-136-171-00	FILM 0.33MF	5% 50V
C605	1-137-399-11	FILM 0.1MF	5% 50V
C606	1-136-171-00	FILM 0.33MF	5% 50V
C607	1-137-399-11	FILM 0.1MF	5% 50V
C608	1-164-625-11	CERAMIC 680PF	10% 500V
C609	1-129-718-00	FILM 0.022MF	5% 630V
C610	1-126-953-11	ELECT 2200MF	20% 35V
C611	1-126-953-11	ELECT 2200MF	20% 35V
C612	1-104-665-11	ELECT 100MF	20% 25V
C613	1-128-548-11	ELECT 4700MF	20% 25V
C614	1-128-548-11	ELECT 4700MF	20% 25V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C615	1-110-626-11	ELECT 330MF	20% 160V
C616	1-164-625-11	CERAMIC 680PF	10% 500V
C617	1-136-559-11	MYLAR 0.0047MF	10% 400V
C618	1-104-989-91	FILM 0.0022MF	5% 200V
C621	$\Delta$ 1-136-519-12	FILM 0.47MF	20% 300V
C622	$\Delta$ 1-136-518-12	FILM 0.33MF	20% 300V
C624	$\Delta$ 1-113-890-61	CERAMIC 0.0022MF	20% 250V
C626	$\Delta$ 1-113-890-61	CERAMIC 0.0022MF	20% 250V
C627	1-126-767-11	ELECT 1000MF	20% 16V
C628	1-104-665-11	ELECT 100MF	20% 25V
C629	1-162-599-12	CERAMIC 0.0047MF	250V
C630	1-162-599-12	CERAMIC 0.0047MF	250V
C631	$\Delta$ 1-161-964-91	CERAMIC 0.0047MF	250V
C632	1-535-143-11	LEAD, JUMPER (10.0MM)	
C633	1-125-555-11	ELECT 330MF	20% 400V
C634	1-535-143-31	LEAD, JUMPER (15.0MM)	
C635	1-136-165-00	FILM 0.1MF	5% 50V
C636	1-136-165-00	FILM 0.1MF	5% 50V
C642	1-161-744-00	CERAMIC 0.01MF	400V
C648	1-101-001-00	CERAMIC 0.001MF	50V
C650	1-126-964-11	ELECT 10MF	20% 50V
C651	1-136-171-00	FILM 0.33MF	5% 50V
C662	1-126-943-11	ELECT 2200MF	20% 25V
C663	1-126-964-11	ELECT 10MF	20% 50V
C664	1-102-129-00	CERAMIC 0.01MF	10% 50V
C665	1-126-940-11	ELECT 330MF	20% 25V
< CONNECTOR >			
CN0008	$\Delta$ 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN0009	$\Delta$ 1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN0701	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P	
CN0702	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P	
CN0703	$\Delta$ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
< DIODE >			
D601	8-719-510-53	DIODE D4SB60L	
D602	8-719-991-33	DIODE 1SS133T-77	
D603	8-719-109-89	DIODE RD5.6ESB2	
D604	1-535-303-00	LEAD, JUMPER (5.0MM)	
D605	8-719-047-31	DIODE RBA-402L	
D607	8-719-510-12	DIODE D10SC4M	
	4-382-854-11	SCREW (M3X10), P, SW (+) (D607)	
D608	8-719-510-12	DIODE D10SC4M	
	4-382-854-11	SCREW (M3X10), P, SW (+) (D608)	
D609	8-719-047-31	DIODE RBA-402L	
D610	8-719-312-39	DIODE R2K-V1	
D611	8-719-510-64	DIODE S2LA20F	
D614	8-719-911-19	DIODE 1SS119-25	
D615	8-719-911-19	DIODE 1SS119-25	
D616	8-719-911-19	DIODE 1SS119-25	
D617	8-719-911-19	DIODE 1SS119-25	
D618	8-719-911-19	DIODE 1SS119-25	
D619	8-719-911-19	DIODE 1SS119-25	
D620	8-719-911-19	DIODE 1SS119-25	
D621	8-719-911-19	DIODE 1SS119-25	
D622	8-719-510-64	DIODE S2LA20F	
D625	8-719-911-19	DIODE 1SS119-25	
D626	8-719-911-19	DIODE 1SS119-25	
D627	8-719-911-19	DIODE 1SS119-25	
D628	8-719-911-19	DIODE 1SS119-25	
D629	8-719-991-33	DIODE 1SS133T-77	

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Ne les remplacer que par une pièce portant le numéro spécifié.

KV-25X3



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D634	8-719-510-64	DIODE S2LA20F		R621	1-249-417-11	CARBON 1K 5%	1/4W F
D635	8-719-991-33	DIODE 1SS133T-77		R622	1-249-421-11	CARBON 2.2K 5%	1/4W
D636	8-719-511-40	DIODE S1VB40		R623	1-249-430-11	CARBON 12K 5%	1/4W
D637	8-719-991-33	DIODE 1SS133T-77		R624	1-249-425-11	CARBON 4.7K 5%	1/4W
D638	8-719-991-33	DIODE 1SS133T-77		R625	1-247-815-91	CARBON 220 5%	1/4W
< FERRITE BEAD >				R626	1-247-863-91	CARBON 22K 5%	1/4W
FB601	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R627	1-247-815-91	CARBON 220 5%	1/4W
FB602	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R628	1-247-885-00	CARBON 180K 5%	1/4W
FB603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R636	1-207-905-00	WIREWOUND 0.27 10%	2W F
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R639	1-247-791-91	CARBON 22 5%	1/4W
< IC >				R640	1-247-791-91	CARBON 22 5%	1/4W
IC601	1-810-051-11	POWER MODULE DM-48		R641	1-247-791-91	CARBON 22 5%	1/4W
IC602 $\Delta$	8-749-010-64	PHOTO COUPLER PC123FY2		R642	1-247-791-91	CARBON 22 5%	1/4W
IC605	8-759-510-52	IC L4941BV		R643	1-535-143-61	LEAD, JUMPER (5.0MM)	
< COIL >				R651	1-215-880-00	METAL OXIDE 10 5%	2W F
L604	1-535-303-00	LEAD, JUMPER (5.0MM)		R652	1-247-891-00	CARBON 330K 5%	1/4W
L605	1-412-523-11	INDUCTOR 6.8UH		R653	1-247-891-00	CARBON 330K 5%	1/4W
L606	1-412-523-11	INDUCTOR 6.8UH		R654	1-247-891-00	CARBON 330K 5%	1/4W
< IC LINK >				R655	1-247-891-00	CARBON 330K 5%	1/4W
PS601 $\Delta$	1-801-550-21	PROTECTOR MODULE 2.5A/MP250		R656	1-249-439-11	CARBON 68K 5%	1/4W
PS602 $\Delta$	1-801-550-21	PROTECTOR MODULE 2.5A/MP250		R657	1-249-429-11	CARBON 10K 5%	1/4W
PS604 $\Delta$	1-801-550-21	PROTECTOR MODULE 2.5A/MP250		R658	1-249-421-11	CARBON 2.2K 5%	1/4W
PS605 $\Delta$	1-801-549-21	PROTECTOR MODULE 2.5A/MP250		R659	1-249-425-11	CARBON 4.7K 5%	1/4W
< TRANSISTOR >				R660	1-249-429-11	CARBON 10K 5%	1/4W
Q601	8-729-032-87	TRANSISTOR 2SC4834NP-F09		R661	1-249-421-11	CARBON 2.2K 5%	1/4W
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q601)		R662	1-249-421-11	CARBON 2.2K 5%	1/4W
Q602	8-729-032-87	TRANSISTOR 2SC4834NP-F09		R663	1-249-429-11	CARBON 10K 5%	1/4W
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q602)		R664	1-249-429-11	CARBON 10K 5%	1/4W
Q603	8-729-119-78	TRANSISTOR 2SC2785-HFE		R667	1-249-377-11	CARBON 0.47 5%	1/4W F
Q604	8-729-200-21	TRANSISTOR 2SC2500-B		R670	1-249-421-11	CARBON 2.2K 5%	1/4W
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE		R682	1-247-688-11	CARBON 10 5%	1/4W F
Q608	8-729-200-21	TRANSISTOR 2SC2500-B		< RELAY >			
Q610	8-729-119-76	TRANSISTOR 2SA1175-HFE		RY601 $\Delta$	1-755-167-11	RELAY, AC POWER	
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE		RY602 $\Delta$	1-755-167-11	RELAY, AC POWER	
Q612	8-729-119-76	TRANSISTOR 2SA1175-HFE		< TRANSFORMER >			
Q615	8-729-200-21	TRANSISTOR 2SC2500-B		LF602 $\Delta$	1-429-860-11	TRANSFORMER, LINE FILTER	
Q621	8-729-200-21	TRANSISTOR 2SC2500-B		T601 $\Delta$	1-429-844-11	TRANSFORMER, CONVERTER (PIT)	
< RESISTOR >				T602 $\Delta$	1-429-254-11	TRANSFORMER, CONVERTER (PRT)	
R601	1-202-933-61	FUSIBLE 0.1 10%	1/2W F	T603 $\Delta$	1-429-952-11	TRANSFORMER, POWER	
R602	1-247-891-00	CARBON 330K 5%	1/4W	< THERMISTOR >			
R603	1-247-891-00	CARBON 330K 5%	1/4W	THP601 $\Delta$	1-809-827-11	THERMISTOR, POSITIVE	
R604	1-216-369-00	METAL OXIDE 1 5%	2W F	VDR601	1-810-977-21	VARISTOR ERZV10D621	
R605	1-247-891-00	CARBON 330K 5%	1/4W	*****			
R606	1-247-891-00	CARBON 330K 5%	1/4W	*A-1638-105-A C BOARD, COMPLETE			
R607	1-216-369-00	METAL OXIDE 1 5%	2W F	*****			
R608	1-247-887-00	CARBON 220K 5%	1/4W	< CAPACITOR >			
R609	1-249-429-11	CARBON 10K 5%	1/4W F	C3701	1-162-114-00	CERAMIC 0.0047MF	2KV
R610	1-249-419-11	CARBON 1.5K 5%	1/4W F	C3703	1-107-662-11	ELECT 22MF	20% 250V
R611	1-249-377-11	CARBON 0.47 5%	1/4W F	C3712	1-102-978-00	CERAMIC 220PF	5% 50V
R614	1-247-807-31	CARBON 100 5%	1/4W	C3713	1-102-978-00	CERAMIC 220PF	5% 50V
R616 $\Delta$	1-202-961-11	WIREWOUND 1.8 5%	10W	C3714	1-102-978-00	CERAMIC 220PF	5% 50V
R618 $\Delta$	1-202-961-11	WIREWOUND 1.8 5%	10W	C3716	1-128-528-11	ELECT 470MF	20% 16V
R619 $\Delta$	1-244-945-91	CARBON 1M 5%	1/2W	C3720	1-162-116-00	CERAMIC 680PF	10% 2KV
R620 $\Delta$	1-218-265-11	METAL 8.2M 5%	1W				

C

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< CONNECTOR >				< RESISTOR >			
CN3701	1-695-915-11	TAB (CONTACT)		R3701	1-202-884-11	SOLID 820K 20% 1/2W	
CN3703	*1-564-512-11	PLUG, CONNECTOR 9P		R3702	1-202-884-11	SOLID 820K 20% 1/2W	
CN3704	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P		R3703	1-202-549-00	SOLID 100 20% 1/2W	
< DIODE >				R3705	1-216-349-00	METAL OXIDE 1 5% 1W F	
D3701	8-719-991-33	DIODE 1SS133T-77		R3706	1-216-349-00	METAL OXIDE 1 5% 1W F	
D3702	8-719-991-33	DIODE 1SS133T-77		R3707	1-249-416-11	CARBON 820 5% 1/4W	
D3703	8-719-991-33	DIODE 1SS133T-77		R3708	1-249-416-11	CARBON 820 5% 1/4W	
D3704	8-719-991-33	DIODE 1SS133T-77		R3709	1-249-416-11	CARBON 820 5% 1/4W	
D3705	8-719-991-33	DIODE 1SS133T-77		R3710	1-215-922-11	METAL OXIDE 6.8K 5% 3W F	
D3706	8-719-991-33	DIODE 1SS133T-77		R3711	1-202-565-00	SOLID 470 20% 1/2W	
D3707	8-719-991-33	DIODE 1SS133T-77		R3712	1-215-922-11	METAL OXIDE 6.8K 5% 3W F	
D3708	8-719-991-33	DIODE 1SS133T-77		R3713	1-202-565-00	SOLID 470 20% 1/2W	
D3709	8-719-991-33	DIODE 1SS133T-77		R3714	1-215-922-11	METAL OXIDE 6.8K 5% 3W F	
D3710	8-719-908-03	DIODE GP08D		R3715	1-202-565-00	SOLID 470 20% 1/2W	
D3714	8-719-991-33	DIODE 1SS133T-77		R3716	1-249-405-11	CARBON 100 5% 1/4W F	
D3715	8-719-031-34	DIODE RGP02-20EG23		R3717	1-249-405-11	CARBON 100 5% 1/4W F	
D3716	8-719-991-33	DIODE 1SS133T-77		R3718	1-249-405-11	CARBON 100 5% 1/4W F	
D3717	8-719-991-33	DIODE 1SS133T-77		R3720	1-249-417-11	CARBON 1K 5% 1/4W F	
D3718	8-719-991-33	DIODE 1SS133T-77		R3721	1-247-885-00	CARBON 180K 5% 1/4W	
D3719	8-719-991-33	DIODE 1SS133T-77		R3722	1-249-417-11	CARBON 1K 5% 1/4W F	
< CRT SOCKET >				R3723	1-247-885-00	CARBON 180K 5% 1/4W	
J3701 $\Delta$	1-526-990-21	SOCKET, CRT		R3724	1-249-417-11	CARBON 1K 5% 1/4W F	
< COIL >				R3725	1-249-419-11	CARBON 1.5K 5% 1/4W	
L3701	1-408-607-31	INDUCTOR 22UH		R3726	1-249-419-11	CARBON 1.5K 5% 1/4W	
L3702	1-408-607-31	INDUCTOR 22UH		R3727	1-249-419-11	CARBON 1.5K 5% 1/4W	
L3703	1-408-409-00	INDUCTOR 10UH		R3728	1-247-815-91	CARBON 220 5% 1/4W	
L3704	1-408-607-31	INDUCTOR 22UH		R3729	1-247-815-91	CARBON 220 5% 1/4W	
L3705	1-408-409-00	INDUCTOR 10UH		R3730	1-247-815-91	CARBON 220 5% 1/4W	
L3706	1-408-607-31	INDUCTOR 22UH		R3731	1-249-403-11	CARBON 68 5% 1/4W	
L3707	1-408-409-00	INDUCTOR 10UH		R3732	1-249-403-11	CARBON 68 5% 1/4W	
L3708	1-412-528-11	INDUCTOR 18UH		R3733	1-249-403-11	CARBON 68 5% 1/4W	
L3709	1-408-409-00	INDUCTOR 10UH		R3734	1-202-549-00	SOLID 100 20% 1/2W	
< TRANSISTOR >				R3735	1-247-885-00	CARBON 180K 5% 1/4W	
Q3701	8-729-906-70	TRANSISTOR BF871-127		R3738	1-249-401-11	CARBON 47 5% 1/4W	
Q3702	8-729-906-70	TRANSISTOR BF871-127		R3739	1-249-401-11	CARBON 47 5% 1/4W	
Q3703	8-729-906-70	TRANSISTOR BF871-127		R3740	1-249-401-11	CARBON 47 5% 1/4W	
Q3704	8-729-326-11	TRANSISTOR 2SC2611		R3741	1-249-435-11	CARBON 33K 5% 1/4W	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q3704)		R3742	1-249-429-11	CARBON 10K 5% 1/4W	
Q3705	8-729-326-11	TRANSISTOR 2SC2611		R3743	1-249-430-11	CARBON 12K 5% 1/4W	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q3705)		R3747	1-216-437-00	METAL OXIDE 5.6K 5% 1W F	
Q3706	8-729-326-11	TRANSISTOR 2SC2611		R3748	1-247-885-00	CARBON 180K 5% 1/4W	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q3706)		R3749	1-216-437-00	METAL OXIDE 5.6K 5% 1W F	
Q3707	8-729-200-17	TRANSISTOR BF421L-AMMO		R3750	1-249-432-11	CARBON 18K 5% 1/4W	
Q3708	8-729-200-17	TRANSISTOR BF421L-AMMO		R3751	1-216-437-00	METAL OXIDE 5.6K 5% 1W F	
Q3709	8-729-200-17	TRANSISTOR BF421L-AMMO		R3752	1-249-431-11	CARBON 15K 5% 1/4W	
Q3710	8-729-119-78	TRANSISTOR 2SC2785-HFE		R3758	1-247-807-31	CARBON 100 5% 1/4W	
Q3711	8-729-119-78	TRANSISTOR 2SC2785-HFE		R3759	1-247-807-31	CARBON 100 5% 1/4W	
Q3712	8-729-119-78	TRANSISTOR 2SC2785-HFE		R3760	1-247-807-31	CARBON 100 5% 1/4W	
Q3715	8-729-119-76	TRANSISTOR 2SA1175-HFE		R3761	1-249-418-11	CARBON 1.2K 5% 1/4W	
Q3716	8-729-906-70	TRANSISTOR BF871-127		R3762	1-249-418-11	CARBON 1.2K 5% 1/4W	
Q3717	8-729-906-70	TRANSISTOR BF871-127		R3763	1-249-418-11	CARBON 1.2K 5% 1/4W	
Q3718	8-729-906-70	TRANSISTOR BF871-127		< VARIABLE RESISTOR >			
				RV3701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
				RV3702	1-241-714-11	RES, ADJ, METAL FILM 110M	



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KV-25X3

D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1640-282-A	D BOARD, COMPLETE *****		C814	1-129-702-00	FILM 0.001MF	10% 400V
	4-201-023-01	SPACER, INSULATING		C816	1-110-486-11	FILM 1MF	5% 400V
	< CAPACITOR >			C817	1-136-759-11	FILM 0.039MF	5% 630V
C101	1-126-965-11	ELECT 22MF	20% 50V	C819	1-136-207-11	FILM 0.047MF	10% 250V
C236	1-136-165-00	FILM 0.1MF	5% 50V	C822	1-126-967-11	ELECT 47MF	20% 50V
C237	1-136-165-00	FILM 0.1MF	5% 50V	C823	1-102-129-00	CERAMIC 0.01MF	10% 50V
C238	1-126-967-11	ELECT 47MF	20% 16V	C824	1-102-228-00	CERAMIC 470PF	10% 500V
C241	1-126-967-11	ELECT 47MF	20% 16V	C825	1-126-964-11	ELECT 10MF	20% 50V
C242	1-126-953-11	ELECT 2200MF	20% 35V	C827	1-102-228-00	CERAMIC 470PF	10% 500V
C243	1-136-165-00	FILM 0.1MF	5% 50V	C828	1-102-030-00	CERAMIC 330PF	10% 500V
C244	1-126-953-11	ELECT 2200MF	20% 35V	C835	1-107-655-11	ELECT 47MF	20% 250V
C245	1-136-165-00	FILM 0.1MF	5% 50V	C836	1-102-228-00	CERAMIC 470PF	10% 500V
C260	1-126-933-11	ELECT 100MF	20% 16V	C837	1-102-228-00	CERAMIC 470PF	10% 500V
C261	1-126-933-11	ELECT 100MF	20% 16V	C838	1-102-228-00	CERAMIC 470PF	10% 500V
C262	1-104-665-11	ELECT 100MF	20% 25V	C841	1-106-375-12	MYLAR 0.022MF	10% 250V
C263	1-136-165-00	FILM 0.1MF	5% 50V	C846	1-107-909-11	ELECT 47MF	20% 50V
C264	1-104-661-91	ELECT 330MF	20% 16V	C851	1-129-702-00	FILM 0.001MF	10% 400V
C265	1-136-165-00	FILM 0.1MF	5% 50V	C852	1-126-968-11	ELECT 100MF	20% 50V
C266	1-104-665-11	ELECT 100MF	20% 25V	C854	1-102-129-00	CERAMIC 0.01MF	10% 50V
C269	1-126-967-11	ELECT 47MF	20% 16V	C855	1-126-941-11	ELECT 470MF	20% 25V
C271	1-126-965-11	ELECT 22MF	20% 50V	C856	1-102-129-00	CERAMIC 0.01MF	10% 50V
C273	1-136-161-00	FILM 0.047MF	5% 50V	C857	1-126-941-11	ELECT 470MF	20% 25V
C274	1-126-961-11	ELECT 2.2MF	20% 50V	C860	1-106-220-00	MYLAR 0.1MF	10% 100V
C275	1-126-961-11	ELECT 2.2MF	20% 50V	C861	1-137-423-11	MYLAR 0.15MF	10% 100V
C276	1-126-967-11	ELECT 47MF	20% 16V	C862	1-130-789-00	FILM 1MF	5% 100V
C277	1-126-934-11	ELECT 220MF	20% 16V	C866	1-137-040-11	FILM 0.0022MF	10% 400V
C278	1-107-714-11	ELECT 10MF	20% 16V	C873	1-162-134-11	CERAMIC 470PF	10% 2KV
C280	1-136-169-00	FILM 0.22MF	5% 50V	C874	1-137-493-11	FILM 0.0047MF	5% 630V
C281	1-126-967-11	ELECT 47MF	20% 16V	C876	1-136-298-00	FILM 0.0033MF	2% 100V
C283	1-136-169-00	FILM 0.22MF	5% 50V	C894	1-102-978-00	CERAMIC 220PF	5% 50V
C286	1-126-968-11	ELECT 100MF	20% 50V	C900	1-101-810-00	CERAMIC 100PF	5% 500V
C620	1-126-964-11	ELECT 10MF	20% 50V	C901	1-101-810-00	CERAMIC 100PF	5% 500V
C639	1-126-964-11	ELECT 10MF	20% 50V	C902	1-137-372-11	FILM 0.022MF	5% 50V
C652	1-136-171-00	FILM 0.33MF	5% 50V	C903	1-137-372-11	FILM 0.022MF	5% 50V
C653	1-126-965-11	ELECT 22MF	20% 50V	C905	1-126-964-11	ELECT 10MF	20% 50V
C654	1-104-664-11	ELECT 47MF	20% 25V	C906	1-136-166-00	FILM 0.12MF	5% 50V
C656	1-126-967-11	ELECT 47MF	20% 16V	C907	1-126-960-11	ELECT 1MF	20% 50V
C657	1-136-165-00	FILM 0.1MF	5% 50V	C908	1-126-960-11	ELECT 1MF	20% 50V
C658	1-136-165-00	FILM 0.1MF	5% 50V	C909	1-136-153-00	FILM 0.01MF	5% 50V
C659	1-136-165-00	FILM 0.1MF	5% 50V	C1628	1-136-244-11	FILM 0.1MF	5% 50V
C660	1-136-164-00	FILM 0.082MF	5% 50V	C2701	1-126-964-11	ELECT 10MF	20% 50V
C666	1-104-661-91	ELECT 330MF	20% 16V	C2702	1-104-664-11	ELECT 47MF	20% 25V
C667	1-136-165-00	FILM 0.1MF	5% 50V	C2706	1-102-820-00	CERAMIC 330PF	5% 50V
C668	1-136-165-00	FILM 0.1MF	5% 50V	< CONNECTOR >			
C669	1-126-933-11	ELECT 100MF	20% 16V	CN0001	*1-564-520-11	PLUG, CONNECTOR 5P	
C670	1-136-165-00	FILM 0.1MF	5% 50V	CN0002	*1-568-878-51	PIN, CONNECTOR 3P	
C671	1-136-165-00	FILM 0.1MF	5% 50V	CN0004	1-568-878-51	PIN, CONNECTOR 3P	
C672	1-126-967-11	ELECT 47MF	20% 16V	CN0005	1-695-915-11	TAB (CONTACT)	
C801	1-123-024-21	ELECT 33MF	10% 160V	CN0101	*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P	
C802	1-136-207-11	FILM 0.047MF	10% 250V	CN0102	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
C805	1-102-212-00	CERAMIC 820PF	10% 500V	CN0521	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
C807	1-162-134-11	CERAMIC 470PF	10% 2KV	CN0722 $\Delta$	*1-580-844-11	PIN, CONNECTOR (POWER)	
C808	1-162-116-00	CERAMIC 680PF	10% 2KV	CN0723 $\Delta$	*1-695-292-11	PIN, CONNECTOR (POWER)	
C809	1-162-116-00	CERAMIC 680PF	10% 2KV	CN0743	*1-564-596-11	PLUG, CONNECTOR 15P	
C810	1-136-558-11	FILM 0.0039MF	10% 400V	CN0745	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
C811	1-113-582-11	FILM 0.017MF	3% 2KV	CN0746	*1-568-879-11	PIN, CONNECTOR 4P	
C812	1-136-759-11	FILM 0.039MF	5% 630V	CN3133	1-568-882-51	PIN, CONNECTOR 7P	
C813	1-109-961-11	FILM 0.75MF	5% 400V	DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P	



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< DIODE >				IC260	8-759-330-93	IC TDA7309	
D101	8-719-982-27	DIODE MTZJ-33C		IC261	8-759-502-21	IC TDA2822M	
D236	8-719-911-19	DIODE 1SS119-25		IC603	8-759-095-34	IC LM2940T-8.0	
D237	8-719-911-19	DIODE 1SS119-25			4-382-854-11	SCREW (M3X10), P, SW (+) (IC603)	
D238	8-719-911-19	DIODE 1SS119-25		IC604	8-759-513-71	IC PQ05RF21	
D239	8-719-911-19	DIODE 1SS119-25			4-202-373-01	SPRING, IC (IC604)	
D262	8-719-911-19	DIODE 1SS119-25		IC606	8-759-991-43	IC L78L12ACZ	
D264	8-719-911-19	DIODE 1SS119-25		IC607	8-759-513-71	IC PQ05RF21	
D276	8-719-911-19	DIODE 1SS119-25			4-202-373-01	SPRING, IC (IC607)	
D278	8-719-911-19	DIODE 1SS119-25		IC801	8-759-103-93	IC UPC393C	
D279	8-719-911-19	DIODE 1SS119-25		IC802	8-759-192-71	IC STV9379	
D280	8-719-911-19	DIODE 1SS119-25			4-202-373-01	SPRING, IC (IC802)	
D281	8-719-911-19	DIODE 1SS119-25		IC900	8-742-014-10	HIC SBX1981-51	
D282	8-719-911-19	DIODE 1SS119-25		IC901	8-749-012-12	IC IS474	
D613	8-719-911-19	DIODE 1SS119-25		IC2701	8-759-603-37	IC M5216P	
D633	1-247-807-31	CARBON 100 5% 1/4W		< JACK >			
D640	8-719-911-19	DIODE 1SS119-25		J900	1-764-606-11	JACK	
D641	8-719-911-19	DIODE 1SS119-25		J901	1-568-678-11	TERMINAL BLOCK, S 3P	
D802	8-719-979-99	DIODE ERD08M-15		< COIL >			
	4-382-854-11	SCREW (M3X10), P, SW (+) (D802)		L601	1-535-303-00	LEAD, JUMPER (5.0MM)	
D803	8-719-043-14	DIODE ESAD39M-06C		L602	1-412-525-31	INDUCTOR 10UH	
	4-382-854-11	SCREW (M3X10), P, SW (+) (D803)		L603	1-412-525-31	INDUCTOR 10UH	
D804	8-719-971-20	DIODE ERC38-06		L802	1-459-123-00	COIL,DUST CORE(PAC)	
D805	8-719-908-03	DIODE GP08D		L803	1-459-123-00	COIL,DUST CORE(PAC)	
D806	8-719-908-03	DIODE GP08D		L806	1-459-592-11	COIL (WITH CORE) (PMC)	
D810	8-719-979-85	DIODE EGP20G		L807	1-412-524-11	INDUCTOR 8.2UH	
D811	8-719-302-43	DIODE ELIZ		L808	1-535-303-00	LEAD, JUMPER (5.0MM)	
D812	8-719-510-64	DIODE SLA20F		L809	1-412-533-21	INDUCTOR 47UH	
D813	8-719-510-64	DIODE SLA20F		L810	1-412-524-11	INDUCTOR 8.2UH	
D814	8-719-908-03	DIODE GP08D		L811	1-459-104-00	COIL, WITH CORE	
D815	8-719-929-15	DIODE HZS9.1NB2		L814	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D816	8-719-110-41	DIODE RD15ES-B2		L815	1-412-523-11	INDUCTOR 6.8UH	
D817	8-719-911-19	DIODE 1SS119-25		L816	1-408-947-00	INDUCTOR 2.2MMH	
D818	8-719-911-19	DIODE 1SS119-25		L817	1-535-303-00	LEAD, JUMPER (5.0MM)	
D819	8-719-911-19	DIODE 1SS119-25		L818	1-535-303-00	LEAD, JUMPER (5.0MM)	
D871	8-719-911-19	DIODE 1SS119-25		L900	1-408-409-00	INDUCTOR 10UH	
D873	8-719-911-19	DIODE 1SS119-25		L901	1-408-409-00	INDUCTOR 10UH	
D874	8-719-911-19	DIODE 1SS119-25		L902	1-249-417-11	CARBON 1K 5% 1/4W	
D875	8-719-048-52	DIODE MTZJ-T-77-20D		L903	1-249-417-11	CARBON 1K 5% 1/4W	
D876	8-719-048-52	DIODE MTZJ-T-77-20D		< IC LINK >			
D901	8-719-030-11	DIODE SLA-570KT3F		PS1601	1-535-303-00	LEAD, JUMPER (5.0MM)	
	*4-203-258-01	HOLDER, LED (D901)		< TRANSISTOR >			
D2701	8-719-911-19	DIODE 1SS119-25		Q276	8-729-030-03	TRANSISTOR DTC144ESA-TP	
D2702	8-719-911-19	DIODE 1SS119-25		Q277	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< FUSE >				Q278	8-729-119-78	TRANSISTOR 2SC2785-HFE	
F601	$\Delta$ 1-532-299-00	FUSE 2.5A 250V		Q279	8-729-119-78	TRANSISTOR 2SC2785-HFE	
	$\Delta$ *1-533-725-11	HOLDER, FUSE; F601		Q280	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< FERRITE BEAD >				Q281	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB201	1-535-143-61	LEAD, JUMPER (5.0MM)		Q282	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB202	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB203	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		Q607	8-729-029-56	TRANSISTOR DTA144ESA	
FB801	1-422-613-11	COIL, AIR CORE		Q614	8-729-029-56	TRANSISTOR DTA144ESA	
FB802	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		Q616	8-729-029-67	TRANSISTOR DTC114ESA-TP	
< IC >				Q617	8-729-029-67	TRANSISTOR DTC114ESA-TP	
IC236	8-759-190-89	IC TDA7265		Q618	8-729-119-76	TRANSISTOR 2SA1175-HFE	
	4-202-373-01	SPRING, IC (IC236)		Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE	
	4-202-710-01	SPACER, INSULATING (IC236)		Q624	8-729-119-78	TRANSISTOR 2SC2785-HFE	



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK		R633	1-249-429-11	CARBON 10K 5%	1/4W
Q802	8-729-821-07	TRANSISTOR 2SC3997CA		R634	1-247-895-91	CARBON 470K 5%	1/4W
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q802)		R635	1-215-926-00	METAL OXIDE 33K 5%	3W F
Q803	8-729-039-68	TRANSISTOR IRF620		R638	1-249-425-11	CARBON 4.7K 5%	1/4W
	4-202-373-01	SPRING, IC (Q803)					
Q804	8-729-039-68	TRANSISTOR IRF620		R644	1-249-425-11	CARBON 4.7K 5%	1/4W
				R645	1-249-410-11	CARBON 270 5%	1/4W
Q2701	8-729-119-78	TRANSISTOR 2SC2785-HFE		R646	1-247-843-11	CARBON 3.3K 5%	1/4W
				R647	1-249-420-11	CARBON 1.8K 5%	1/4W
				R648	1-535-303-00	LEAD, JUMPER (5.0MM)	
		< RESISTOR >					
R236	1-249-424-11	CARBON 3.9K 5%	1/4W	R649	1-535-303-00	LEAD, JUMPER (5.0MM)	
R237	1-249-417-11	CARBON 1K 5%	1/4W	R666	1-249-413-11	CARBON 470 5%	1/4W
R239	1-249-424-11	CARBON 3.9K 5%	1/4W	R668	1-249-430-11	CARBON 12K 5%	1/4W
R240	1-249-417-11	CARBON 1K 5%	1/4W	R675	1-535-303-00	LEAD, JUMPER (5.0MM)	
R244	1-249-413-11	CARBON 470 5%	1/4W	R676	1-249-437-11	CARBON 47K 5%	1/4W
R245	1-249-430-11	CARBON 12K 5%	1/4W	R677	1-249-437-11	CARBON 47K 5%	1/4W
R246	1-249-430-11	CARBON 12K 5%	1/4W	R678	1-249-425-11	CARBON 4.7K 5%	1/4W
R247	1-249-413-11	CARBON 470 5%	1/4W	R681	1-249-414-11	CARBON 560 5%	1/4W
R248	1-249-425-11	CARBON 4.7K 5%	1/4W	R802	1-215-916-00	METAL OXIDE 680 5%	3W F
R249	1-216-357-00	METAL OXIDE 4.7 5%	1W F	R803	1-215-916-00	METAL OXIDE 680 5%	3W F
R250	1-216-357-00	METAL OXIDE 4.7 5%	1W F	R804	1-215-916-00	METAL OXIDE 680 5%	3W F
R251	1-249-429-11	CARBON 10K 5%	1/4W	R805	1-216-487-11	METAL OXIDE 12K 5%	3W F
R252	1-249-429-11	CARBON 10K 5%	1/4W	R806	1-249-411-11	CARBON 330 5%	1/4W
R260	1-247-863-91	CARBON 22K 5%	1/4W	R807	1-247-843-11	CARBON 3.3K 5%	1/4W
R261	1-247-863-91	CARBON 22K 5%	1/4W	R808	1-216-384-11	METAL OXIDE 0.39 5%	3W F
R262	1-249-421-11	CARBON 2.2K 5%	1/4W	R809	1-215-880-00	METAL OXIDE 10 5%	2W F
R263	1-249-421-11	CARBON 2.2K 5%	1/4W	R810	1-215-914-11	METAL OXIDE 330 5%	3W F
R264	1-212-857-00	FUSIBLE 10 5%	1/4W F	R811	1-216-434-11	METAL OXIDE 1.8K 5%	1W F
R265	1-249-389-11	CARBON 4.7 5%	1/4W F	R817	1-202-972-61	FUSIBLE 1 5%	1/4W F
R266	1-249-389-11	CARBON 4.7 5%	1/4W F	R818	1-249-377-11	CARBON 0.47 5%	1/4W F
R267	1-247-815-91	CARBON 220 5%	1/4W	R819	1-249-377-11	CARBON 0.47 5%	1/4W F
R268	1-247-815-91	CARBON 220 5%	1/4W	R820	1-214-907-00	METAL 56K 1%	1/2W
R269	1-249-415-11	CARBON 680 5%	1/4W	R821	1-249-420-11	CARBON 1.8K 5%	1/4W
R270	1-249-415-11	CARBON 680 5%	1/4W	R823	1-249-420-11	CARBON 1.8K 5%	1/4W
R271	1-247-742-11	CARBON 180 5%	1/2W F	R835	1-249-432-11	CARBON 18K 5%	1/4W
R276	1-535-303-00	LEAD, JUMPER (5.0MM)		R837	1-249-422-11	CARBON 2.7K 5%	1/4W
R277	1-249-419-11	CARBON 1.5K 5%	1/4W	R843	1-202-822-00	SOLID 2.2K 20%	1/2W
R278	1-249-441-11	CARBON 100K 5%	1/4W	R844	1-249-424-11	CARBON 3.9K 5%	1/4W
R279	1-249-429-11	CARBON 10K 5%	1/4W	R845	1-247-881-00	CARBON 120K 5%	1/4W
R280	1-249-425-11	CARBON 4.7K 5%	1/4W	R846	1-249-422-11	CARBON 2.7K 5%	1/4W
R281	1-249-437-11	CARBON 47K 5%	1/4W	R847	1-249-437-11	CARBON 47K 5%	1/4W
R282	1-249-430-11	CARBON 12K 5%	1/4W	R848	1-249-425-11	CARBON 4.7K 5%	1/4W
R283	1-249-429-11	CARBON 10K 5%	1/4W	R849	1-249-429-11	CARBON 10K 5%	1/4W
R284	1-249-432-11	CARBON 18K 5%	1/4W	R850	1-249-389-11	CARBON 4.7 5%	1/4W F
R285	1-249-425-11	CARBON 4.7K 5%	1/4W	R851	1-216-394-00	METAL OXIDE 2.7 5%	3W F
R286	1-249-421-11	CARBON 2.2K 5%	1/4W	R854	1-249-436-11	CARBON 39K 5%	1/4W
R287	1-249-412-11	CARBON 390 5%	1/4W	R855	1-249-417-11	CARBON 1K 5%	1/4W
R288	1-249-421-11	CARBON 2.2K 5%	1/4W	R857	1-202-822-00	SOLID 2.2K 20%	1/2W
R289	1-249-421-11	CARBON 2.2K 5%	1/4W	R859	1-249-432-11	CARBON 18K 5%	1/4W
R290	1-247-807-31	CARBON 100 5%	1/4W	R860	1-247-843-11	CARBON 3.3K 5%	1/4W
R291	1-249-421-11	CARBON 2.2K 5%	1/4W	R861	1-249-417-11	CARBON 1K 5%	1/4W
R292	1-249-429-11	CARBON 10K 5%	1/4W	R862	1-249-383-11	CARBON 1.5 5%	1/4W F
R293	1-249-429-11	CARBON 10K 5%	1/4W	R863	1-216-475-11	METAL OXIDE 120 5%	3W F
R294	1-249-429-11	CARBON 10K 5%	1/4W	R864	1-535-303-00	LEAD, JUMPER (5.0MM)	
R295	1-247-885-00	CARBON 180K 5%	1/4W	R865	1-249-436-11	CARBON 39K 5%	1/4W
R296	1-247-885-00	CARBON 180K 5%	1/4W	R866	1-249-432-11	CARBON 18K 5%	1/4W
R297	1-247-807-31	CARBON 100 5%	1/4W	R867	1-216-389-11	METAL OXIDE 1 5%	3W F
R298	1-247-807-31	CARBON 100 5%	1/4W	R868	1-249-418-11	CARBON 1.2K 5%	1/4W
R630	1-249-419-11	CARBON 1.5K 5%	1/4W	R875	1-535-303-00	LEAD, JUMPER (5.0MM)	
R631	1-215-477-00	METAL 220K 1%	1/4W	R881	1-247-779-91	CARBON 6.8 5%	1/4W
R632	1-249-416-11	CARBON 820 5%	1/4W	R895	1-215-866-11	METAL OXIDE 330 5%	1W F

**D****VM**

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R900	1-247-815-91	CARBON 220 5%	1/4W	C1718	1-126-934-11	ELECT 220MF	20% 16V
R908	1-249-401-11	CARBON 47 5%	1/4W	C1719	1-126-964-11	ELECT 10MF	20% 50V
R909	1-249-437-11	CARBON 47K 5%	1/4W	C1722	1-101-810-00	CERAMIC 100PF	5% 500V
R910	1-249-437-11	CARBON 47K 5%	1/4W	C1723	1-126-791-11	ELECT 10MF	20% 16V
R911	1-249-425-11	CARBON 4.7K 5%	1/4W	C1724	1-101-810-00	CERAMIC 100PF	5% 500V
R912	1-249-421-11	CARBON 2.2K 5%	1/4W	C1725	1-102-947-00	CERAMIC 10PF	0.5PF 50V
R913	1-249-425-11	CARBON 4.7K 5%	1/4W	C1725	1-102-947-00	CERAMIC 10PF	0.5PF 50V
R914	1-249-421-11	CARBON 2.2K 5%	1/4W	C1725	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
R916	1-247-807-31	CARBON 100 5%	1/4W	C1725	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
R917	1-259-880-11	CARBON 2.2M 5%	1/4W	< CONNECTOR >			
R922	1-249-406-11	CARBON 120 5%	1/4W	CN1830	1-568-882-51	PIN, CONNECTOR 7P	
R923	1-249-406-11	CARBON 120 5%	1/4W	< DIODE >			
R925	1-249-429-11	CARBON 10K 5%	1/4W	D1701	8-719-914-43	DIODE DAN202K	
R926	1-249-429-11	CARBON 10K 5%	1/4W	D1702	8-719-914-42	DIODE DA204K	
R1654	1-535-303-00	LEAD, JUMPER (5.0MM)		D1704	8-719-982-37	DIODE MTZJ-39C	
R1655	1-535-303-00	LEAD, JUMPER (5.0MM)		D1705	8-719-982-37	DIODE MTZJ-39C	
R2701	1-247-863-91	CARBON 22K 5%	1/4W	D1706	8-719-914-42	DIODE DA204K	
R2702	1-247-863-91	CARBON 22K 5%	1/4W	D1708	8-719-914-42	DIODE DA204K	
R2703	1-247-863-91	CARBON 22K 5%	1/4W	D1709	8-719-914-42	DIODE DA204K	
R2704	1-247-863-91	CARBON 22K 5%	1/4W	< COIL >			
R2705	1-249-429-11	CARBON 10K 5%	1/4W	L1701	1-216-296-91	CONDUCTOR, CHIP	
R2706	1-249-429-11	CARBON 10K 5%	1/4W	L1702	1-408-404-00	INDUCTOR 3.9UH	
R2707	1-535-303-00	LEAD, JUMPER (5.0MM)		< TRANSISTOR >			
R2708	1-249-429-11	CARBON 10K 5%	1/4W	Q1701	8-729-901-59	TRANSISTOR BF199	
R2713	1-535-303-00	LEAD, JUMPER (5.0MM)		Q1702	8-729-216-22	TRANSISTOR 2SA1162-G	
R2719	1-212-857-00	FUSIBLE 10 5%	1/4W F	Q1703	8-729-017-05	TRANSISTOR 2SA1837	
< SWITCH >				Q1704	4-382-854-11	SCREW (M3X10), P, SW (+) (Q1703)	
S601 $\Delta$	1-571-433-21	SWITCH, PUSH (AC POWER)		Q1704	8-729-620-06	TRANSISTOR 2SC3052-EF	
S900	1-692-979-11	SWITCH, TACTILE		Q1705	8-729-017-06	TRANSISTOR 2SC4793	
S901	1-692-979-11	SWITCH, TACTILE		Q1706	4-382-854-11	SCREW (M3X10), P, SW (+) (Q1705)	
S902	1-692-979-11	SWITCH, TACTILE		Q1707	8-729-620-06	TRANSISTOR 2SC3052-EF	
< TRANSFORMER >				Q1708	8-729-901-59	TRANSISTOR BF199	
T801	1-427-762-11	TRANSFORMER, FERRITE (HDT)		Q1710	8-729-216-22	TRANSISTOR 2SA1162-G	
T803	1-426-897-11	TRANSFORMER, FERRITE (PMT)		Q1711	8-729-039-27	TRANSISTOR BC546B	
T804	1-426-940-11	HLT		Q1712	8-729-039-25	TRANSISTOR BC556B	
T805 $\Delta$	1-453-222-11	TRANSFORMER ASSY, FLYBACK NX-4003/U2B4		< RESISTOR >			
< THERMISTOR >				R1701	1-216-025-91	METAL GLAZE 100 5%	1/10W
TH801	1-800-193-00	THERMISTOR (DIRECT-HEATING DINK)		R1702	1-249-413-11	CARBON 470 5%	1/4W
*****				R1703	1-216-174-00	METAL GLAZE 100 5%	1/8W
*A-1644-080-A VM BOARD, COMPLETE				R1704	1-249-418-11	CARBON 1.2K 5%	1/4W
*****				R1705	1-247-736-11	CARBON 56 5%	1/2W F
< CAPACITOR >				R1706	1-249-414-11	CARBON 560 5%	1/4W F
C1701	1-104-661-91	ELECT 330MF	20% 16V	R1707	1-249-411-11	CARBON 330 5%	1/4W
C1702	1-163-241-11	CERAMIC CHIP 39PF	5% 50V	R1709	1-249-412-11	CARBON 390 5%	1/4W
C1704	1-161-830-00	CERAMIC 0.0047MF	500V	R1710	1-216-295-91	CONDUCTOR, CHIP	
C1706	1-107-638-11	ELECT 33MF	20% 160V	R1711	1-249-432-11	CARBON 18K 5%	1/4W
C1707	1-126-964-11	ELECT 10MF	20% 50V	R1712	1-216-085-00	METAL GLAZE 33K 5%	1/10W
C1708	1-163-075-00	CERAMIC CHIP 0.047MF	50V	R1713	1-216-083-00	METAL GLAZE 27K 5%	1/10W
C1709	1-104-999-11	FILM 0.1MF	5% 200V	R1714	1-216-073-00	METAL GLAZE 10K 5%	1/10W
C1710	1-136-203-11	FILM 0.01MF	10% 250V	R1715	1-215-866-11	METAL OXIDE 330 5%	1W F
C1711	1-162-318-11	CERAMIC 0.001MF	10% 500V	R1716	1-249-417-11	CARBON 1K 5%	1/4W F
C1712	1-107-667-11	ELECT 2.2MF	20% 160V	R1717	1-249-432-11	CARBON 18K 5%	1/4W
C1713	1-162-318-11	CERAMIC 0.001MF	10% 500V	R1718	1-249-412-11	CARBON 390 5%	1/4W
C1714	1-136-203-11	FILM 0.01MF	10% 250V	R1719	1-249-416-11	CARBON 820 5%	1/4W
C1715	1-163-001-11	CERAMIC CHIP 220PF	10% 50V				
C1716	1-126-964-11	ELECT 10MF	20% 50V				

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

KV-25X3

VM

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1720	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1721	1-249-414-11	CARBON 560 5%	1/4W
R1722	1-216-295-91	CONDUCTOR, CHIP	
R1723	1-249-429-11	CARBON 10K 5%	1/4W
R1724	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R1725	1-249-413-11	CARBON 470 5%	1/4W
R1726	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1727	1-249-402-11	CARBON 56 5%	1/4W F
R1729	1-216-166-00	METAL GLAZE 47 5%	1/8W
R1730	1-216-121-91	METAL GLAZE 1M 5%	1/10W
R1731	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1735	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1736	1-247-807-31	CARBON 100 5%	1/4W
R1737	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R1738	1-216-174-00	METAL GLAZE 100 5%	1/8W
R1739	1-216-222-00	METAL GLAZE 10K 5%	1/8W
R1740	1-216-174-00	METAL GLAZE 100 5%	1/8W
R1741	1-216-166-00	METAL GLAZE 47 5%	1/8W
R1743	1-216-021-00	METAL GLAZE 68 5%	1/10W
R1744	1-216-150-91	METAL GLAZE 10 5%	1/8W
R1745	1-216-150-91	METAL GLAZE 10 5%	1/8W

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS *****	
$\Delta$	1-406-806-21	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTABLE DISK; 15MM Ø	
$\Delta$	1-453-222-11	TRANSFORMER ASSY, FLYBACK (NX-4003/U2B4)	
	1-504-571-21	SPEAKER (7.5X13CM)	
$\Delta$	1-571-433-21	SWITCH, PUSH (AC POWER)	
	1-693-338-11	TUNER (TUVIF) (AEP) (KV-25X3A/25X3D/25X3E)	
	1-693-340-11	TUNER (TUVIP) (FR) (KV-25X3B)	
$\Delta$	1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V	
$\Delta$	8-451-474-11	DEFLECTION YOKE (Y25GXCB)	
$\Delta$	1-452-509-41	NECK ASSY, (NA-308)	
V901	$\Delta$ 8-733-243-05	PICTURE TUBE (SD-257) (M60LCS60X)	
$\Delta$	8-733-254-77	ITC	

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ACCESSORIES AND PACKING MATERIALS  
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1-769-175-11	CABLE, ANTENNA (WITH FILTER)	
*4-395-957-01	BAG, PROTECTION	
*4-202-592-01	CUSHION (UPPER) (ASSY)	
*4-202-591-01	CUSHION (LOWER) (ASSY)	
*4-203-413-01	INDIVIDUAL CARTON	
4-203-846-41	MANUAL INSTRUCTION	(KV-25X3A) (ITALIAN)
4-203-846-51	MANUAL INSTRUCTION	(KV-25X3B) (FRENCH/GERMAN/ITALIAN/DUTCH)
4-203-846-11	MANUAL INSTRUCTION	(KV-25X3D) (GERMAN/ENGLISH/DUTCH/GREEK/TURKISH)
4-203-846-71	MANUAL INSTRUCTION	(KV-25X3E) (SPANISH)
4-203-846-81	MANUAL INSTRUCTION	(KV-25X3E) (PORTUGUESE/DANISH/SWEDISH/ NORWEGIAN/FINNISH)

REMOTE COMMANDER  
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1-473-692-11	COMMANDER, STANDARD TYPE (RM-862)
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